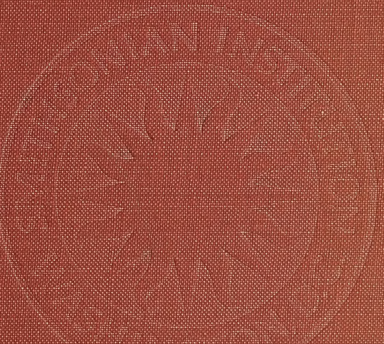

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UNITED STATES NATIONAL MUSEUM

BULLETIN 229
WASHINGTON, D.C.
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Papers 31–33
On Numismatics

SMITHSONIAN INSTITUTION • WASHINGTON, D.C. 1970

Publications of the United States National Museum

The scholarly and scientific publications of the United States National Museum include two series, *Proceedings of the United States National Museum* and *United States National Museum Bulletin.*

In these series, the Museum publishes original articles and monographs dealing with the collections and work of its constituent museums—The Museum of Natural History and the Museum of History and Technology—setting forth newly acquired facts in the fields of anthropology, biology, history, geology, and technology. Copies of each publication are distributed to libraries, to cultural and scientific organizations, and to specialists and others interested in the different subjects.

The *Proceedings,* begun in 1878, are intended for the publication, in separate form, of shorter papers from the Museum of Natural History. These are gathered in volumes, octavo in size, with the publication date of each paper recorded in the table of contents of the volume.

In the *Bulletin* series, the first of which was issued in 1875, appear longer, separate publications consisting of monographs (occasionally in several parts) and volumes in which are collected works on related subjects. *Bulletins* are either octavo or quarto in size, depending on the needs of the presentation. Since 1902 papers relating to the botanical collections of the Museum of Natural History have been published in the *Bulletin* series under the heading *Contributions from the United States National Herbarium,* and since 1959, in *Bulletins* titled "Contributions from the Museum of History and Technology," have been gathered shorter papers relating to the collections and research of that Museum.

The present collection of Contributions, Papers 31–33, comprises *Bulletin* 229. Each of these papers has been previously published in separate form. The year of publication is shown on the last page of each paper.

Frank A. Taylor
Director, United States National Museum

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Papers 31–33

On Numismatics

CONTRIBUTIONS FROM
THE MUSEUM OF HISTORY AND TECHNOLOGY:
PAPER 31

HISTORY OF THE NATIONAL NUMISMATIC COLLECTIONS

Vladimir Clain-Stefanelli

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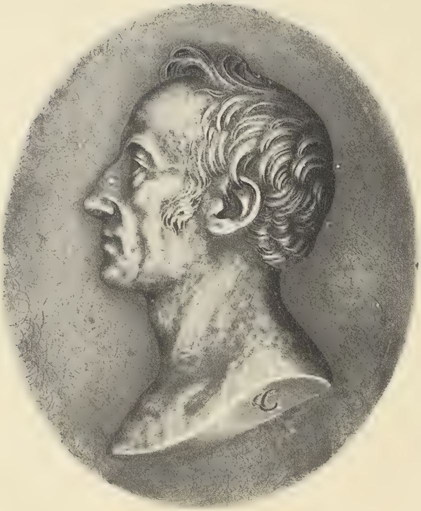

James Smithson Esq^{r}.
1817.

Fig. 1.—Medallion of James Smithson by N. P. Tiolier, 1817. The back bears Smithson's signature (reproduced below medallion). About twice actual size.

HISTORY OF THE NATIONAL NUMISMATIC COLLECTIONS

By Vladimir Clain-Stefanelli

ORIGINS AND EARLY YEARS TO 1880

The national numismatic collections had their beginnings in the early 19th century in Washington, D.C. They found a central repository in the Smithsonian Institution when that organization was founded in 1846 in compliance with the will of James Smithson, an English scientist, who bequeathed his fortune to the United States for the "increase and diffusion of knowledge." Smithson's own interest in numismatics is indicated in a listing of his personal property which included "two pasteboard boxes containing medals, coins . . . etc." [1] as certified by the English consul in Genoa where he died on June 27, 1829, at the age of 63 or 64. The disposition of these items is unknown, but among his effects which did reach the United States was a medallion (fig. 1) to which was attached a paper with the words "my likeness" written in Smithson's hand.[2] (This medallion has previously been attributed to Antonio Canova, but it is not his work. It was modeled in 1817 by Nicolas Pierre Tiolier, engraver general at the French Mint from 1816 to 1843.)

On behalf of the United States Government, Richard Rush was appointed to receive the Smithson bequest and he made the necessary arrangements for transforming the estate into hard money, which amounted to 104,960 gold sovereigns, 8 shillings, and 6 pence.[3] Rush reported its safe arrival in New York on August 29, 1838,[4] and deposited the gold at the Mint for recoining into United States money; it totaled $508,318.46.[5]

No official attempt was made to preserve examples of the James Smithson gold transfer as historical mementos. Certain historical and numismatic facts, however, contribute to the conclusion that at least two of the sovereigns (fig. 2) deposited by Richard Rush were probably saved from the melting pot and are now preserved in the national numismatic collections (see Appendix I).

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[1] WILLIAM J. RHEES, "James Smithson and his Bequest," *in Annual Report of the Board of Regents of the Smithsonian Institution . . . for the Year 1879*, Washington 1880, p. 156.

[2] The medallion is cast in brass and partly chased. Oval in shape, it measures 52.5 x 63 mm; its thickness is 5 mm at the border and 10 mm at its highest point. The back shows vertical striations from planing and the lightly traced inscription engraved on two lines reads, "James Smithson Esqr./1817". It weighs 134.345 grams. This medallion served as a model for the great seal of the Smithsonian by Edward Stabler, ordered by the first Board of Regents, also for the portrait engraved by Charles Burt and published by the Smithsonian for the vignette which appeared on all of the Institution's publications up to the 1880s. It was also used as the model for the Smithson Medal, designed by Paul Vincze and first presented to the Royal Society at the James Smithson Bicentennial celebration in 1965.

[3] For data about the transfer, see WILLIAM JONES RHEES, *The Smithsonian Institution: Documents Relative to its Origin and History. 1835–1899*, vol. 1., Washington 1901, pp. 7ff.

[4] Ibid., p. 100, Richard Rush to John Forsyth. This large quantity of gold was packed in 105 bags, each bag containing 1000 sovereigns with the exception of one bag which contained only 960 sovereigns plus the 8 shillings and 6 pence wrapped in paper. The bags were placed in 11 boxes—ten of them contained 10,000 sovereigns each, while the eleventh box was used for the remaining 5 bags—and shipped on board the *Mediator*.

[5] Ibid., pp. 101–102. On September 4, 1838, Secretary of the Treasury Levi Woodbury requested that $50,000 be coined in gold immediately: see National Archives, Records of the United States Mint at Philadelphia, General Correspondence and other orders concerning the Smithson legacy, on September 5, and November 5, 1838.

Because the roots of the Smithsonian Institution's numismatic collections reach back to the beginning of cultural activity and museum life in the District of Columbia, a summary of these origins is in order. As early as 1816 "The Columbian Institute for the Promotion of Arts and Sciences" was active in Washington and on May 20, 1818, it was granted a charter from Congress. During the two decades of its existence, its interests often seemed directed toward natural history and especially mineralogy and botany, but its endeavors were actually quite general in scope. An interesting numismatic sidelight on the Institute is that among its founders was Thomas Law (1756–1834). He came from a prominent English family and, after a distinguished career in India, moved to the United States in 1793 where he soon became one of the most active citizens of Washington. He was keenly interested in economics and was an ardent proponent of a national paper currency. Whenever there was occasion—in publications, at public meetings, and particularly at meetings of the Columbian Institute—he expounded his ideas for a "uniform, permanently secure currency," describing the advantages of the system he championed. The president and directors of the Columbian Institute ordered the publication of one of his addresses, showing the interest they were taking in Law's proposals and extolling his preoccupations which were so akin to the modern concept of numismatics.

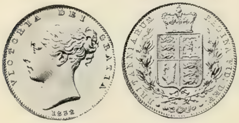
Fig. 2.—**British Sovereign**, 1838, from the original Smithsonian deposit.

It can be assumed that the Columbian Institute's small numismatic collection was kept in the Intitute's cabinet. (Additional information is presented in Appendix II.) Insofar as is known, the public was never invited to view the displays. When the charter for the Columbian Institute expired in 1838, associates "were invited to become members of the National Institution, and to deposit in its cabinet their effects, books, and papers." [6]

The National Institution for the Promotion of Science, or the National Institute as it was later called, was organized on May 15, 1840, under the leadership of Joel Roberts Poinsett of South Carolina, Secretary of War under President Martin Van Buren. Its purpose was to establish a national museum with the idea that, later, it would be entrusted with the administration of Smithson's bequest.

The distinction of being first to offer public exhibits featuring numismatic objects, however, goes to John Varden, an enterprising private citizen of Washington, D.C. He opened a small museum adjoining his 5th Street home, in 1836, with displays consisting of some 500 "curiousities," and he kept a record of the museum's numismatic collections. In December 1839 Varden made arrangements for a larger museum in the Masonic Hall at 4½ and D Streets. In 1840 the "Washington Museum" or "Washington City Museum" was visited by representatives of the National Institute who came to examine the exhibitions and negotiate concerning their acquisition. An agreement was apparently reached since Varden sold his collections to the Institute for $1,500 in June 1840. The curator of the National Institute, Dr. Henry King, had the entire inventory of Varden's museum installed in the National Gallery Hall at the United States Patent Office. Varden accompanied the collections as an "assistant, who is also a good mechanic and arranger . . . at $1.50 per day." [7] A brief account of the records from Varden's museum and excerpts of data of numismatic interest are given in Appendix III.

Thus, the National Institute took over the collections assembled by the Columbian Institute and by John Varden. For four years following its organization in 1840, the National Institute was exceedingly active and prosperous. In rooms made available at the Patent Office Building (fig. 3) it gathered, under the name of the "National Cabinet of Curiosities," a nucleus for a national museum.

A report of the Committee of the National Institute dated January 1, 1842, indicates numismatic holdings

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[6] *Bulletin of the Proceedings of the National Institution for the Promotion of Science*, Washington, 1841, vol. 1, p. 94; G. Brown Goode, "The Genesis of the National Museum," p. 274 in *Report of the U.S. National Museum . . . 1891* (Washington, 1892). In fact, the history of some of the objects in the National Museum may be traced back to the cabinet of the Columbian Institute.

[7] Ibid., p. 349.

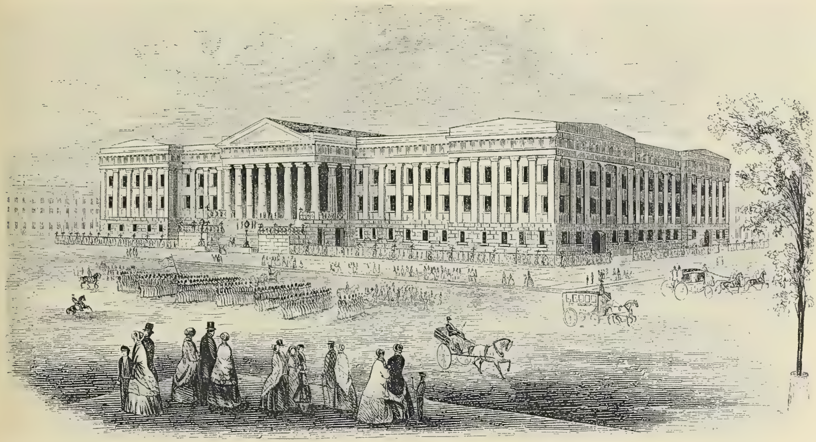

Fig. 3.—A View of the Patent Office Building, Washington, D.C. (from *Gleason's Pictorial Drawing-Room Companion,* 1853).

that even included 500 plaster castings of medals and seals.[8] The exhibits featured a scattering of numismatic material, but no particular area was devoted to a general numismatic display. The Institute helped to create a public opinion favorable to the establishment of a national museum as an idea worthy of consideration by the United States Government. It failed, however, to secure public recognition, and it lost impetus after the Smithsonian Institution was established. The transfer of its collections to the Smithsonian commenced in 1858 but was not completed until 1883.

We have rather detailed information about the scope of the Institute's numismatic collections and the various accretions of coins, paper currencies, and medals, as well as numismatic publications. This information may be found in the four *Bulletins* published by the National Institute from 1841 to 1846. These volumes record donations of more than 2,800 numismatic items received from about seventy donors (Appendix IV A).

The exhibits arranged by the National Institute featured a scattering of numismatic material. No particular area was devoted to a general display of coins or paper money, the entire museum being set up mainly in the style of a cabinet of curiosities. Valuable information about some of the numismatic displays around 1852 may be found in a manuscript catalog prepared by John Varden and preserved in the Smithsonian Archives (Appendix IV B).

A more comprehensive account, at least in some respects, is given in a guidebook to the National Institute published in 1855 by Alfred Hunter, listing numismatic items on view in the "large and magnificent hall" (fig. 4) (Appendix IV C).

On August 10, 1846, an Act of Congress establishing the Smithsonian Institution was signed by President Polk, and on May 1, 1847, the cornerstone of its first building was laid on the Mall. In the early years of its existence and before any numismatic collections were assembled at the Institution, a Smithsonian project was conceived that indicates the expanding interest in coins and medals during the first half of the 19th century. Charles Coffin Jewett, widely known pioneer of the American library movement and Assistant Secretary and Librarian of the Smithsonian, proposed to assemble a detailed account of all public libraries in the United States. Aware that libraries are frequently the repositories of collections of coins and medals, Jewett, in his circular to these libraries, asked if they had any collection of medals or coins, and "If so, please to state the number of articles of each description."[9] The results of his efforts, incorporating information received through 1850, were published in a 207-page report printed in 1851. It shows that 40 libraries in 14 different states had collections totaling about 10,000 coins and 1,000 medals. Because of their importance for the history of numismatics in the United States, all data on coins and medals contained in the Jewett report are presented in Appendix V.

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[8] Ibid., p. 347.

After Jewett's departure from the Smithsonian in 1855, the Secretary, Joseph Henry, tried to continue his project. In a letter dated December 24, 1858, he asked the United States Mint for an account of their numismatic library and collections to be used in a Smithsonian book on United States public libraries.[10] The reply on December 29, 1858, forwarding a listing of their books, mentions previous correspondence in November 1857 on the same subject. Unfortunately, Joseph Henry never published the wealth of detailed information assembled for this project.

In addition to the accession lists, several papers published during the period 1860–1880 in the Smithsonian's *Annual Reports* are of special numismatic interest (see Appendix VI). The accessions mention a scattering of foreign coins, paper currencies, and some medals. A set of Japanese gold and silver coins was presented by Japan's Minister Extraordinary and Plenipotentiary (1870–1872), the Honorable Arinori Mori,[11] to mention a characteristic example of the donations received. Also, as a result of general requests for library materials, some publications were added, such as British Museum catalogues on ancient Greek coins[12] and some numismatic periodicals.

GROWTH OF THE COLLECTIONS, 1880–1923

The period after 1880 marked a turning point for numismatic endeavors at the Smithsonian. This era was introduced by two equally important events: the centennial exposition of 1876 in Philadelphia, which left such an enormous quantity of material in the custody of the Smithsonian Institution that a new structure (the United States National Museum, now the Arts and Industries Building) had to be erected; and the appointment of George Brown Goode as Assistant Secretary in charge of this Museum. Many of the guiding principles expressed by Goode in the 1880s were not realized in numismatics until 1961 when the first series of modernized monetary-history exhibits was set up.[13]

Goode was a collector of coins and medals. As a result, he understood the peculiar character of the study of numismatics and recognized the problems it posed as a museum discipline. In some instances, the exhibit methods suggested by Goode were dictated by his overriding idea of their educational and instructive scope, to such an extent that they may well have appeared impractical. In 1881 he suggested that "a collection of the standard works on numismatics shown in a case adjoining a collection of coins, would have a decided educational value, giving the public information which they would otherwise have to seek from curators."[14] Another of Goode's ideas on the presentation of numismatic ex-

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[9] Charles C. Jewett, "Appendix to the Report of the Board of Regents of the Smithsonian Institution, Containing a Report on the Public Libraries of the United States of America, January 1, 1850," in *Fourth Annual Report of Regents of the Smithsonian . . .* Washington, 1850, p. 5, note.

[10] National Archives, Records of the United States Mint at Philadelphia, Correspondence.

[11] *Annual Report of the Board of Regents of the Smithsonian Institution, Showing the Operations, Expenditures, and Condition of the Institution for the Year 1872* [hereinafter cited as *SI Report*], p. 59. For other accessions during the period 1860–1880, see the *Annual Reports* for: *1860*, pp. 79, 83; *1864*, p. 88; *1869*, p. 54; *1870*, p. 49; *1872*, pp. 57, 59; *1874*, p. 56; *1875*, pp. 76f.; *1876*, p. 89; *1877*, p. 102; *1878*, p. 100; *1879*, pp. 94, 98; *1880*, pp. 19f, 65f, 111.

[12] Ibid., 1877, p. 28.

[13] G. Brown Goode, *Museum History and Museums of History*, New York, 1889, pp. 262–263.

[14] *SI Report*, 1881, p. 87.

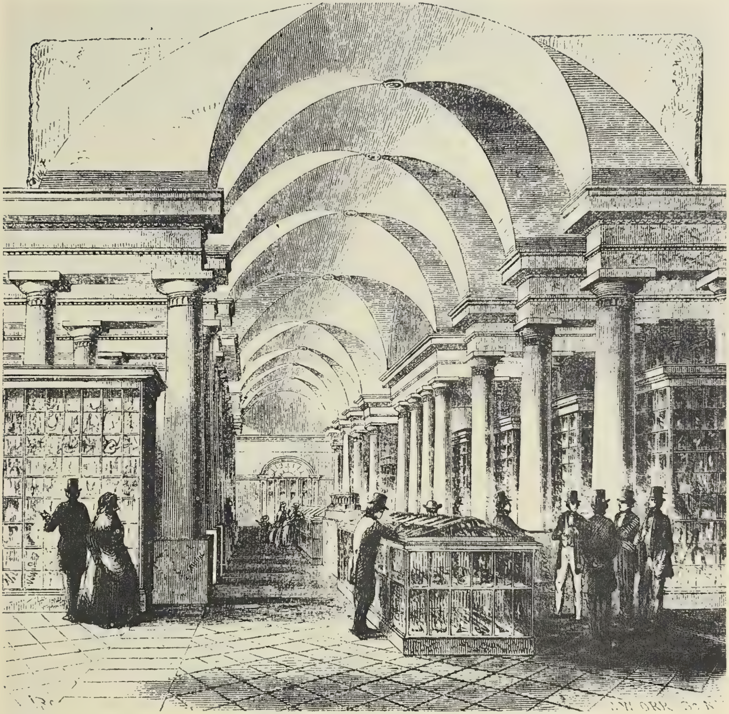

Fig. 4.—South Hall in the Museum of the United States Patent Office. (From *United States Magazine*, 1856).

hibits may be gleaned from Professor S. F. Baird in his Secretary's report in the Smithsonian's *Annual Report* for 1886: "It is intended to arrange a series of the coins by countries, showing with them also paper currency and postage stamps, giving, as far as possible, the history of each coinage." [15] This casual comment again demonstrates Goode's enlightened direction and independent mind. Only in its most recent exhibits, however, has the National Museum succeeded in breaking away from the traditional metalistic approach in numismatics.

Possibly it was because of Goode's concern with numismatics and his understanding of the peculiar character of the science that in the beginning numismatics was considered as a separate entity. The National Museum's *Report* for 1886 lists "coins and medals" as a separate group amounting to 1,055

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[15] *SI Report*, 1886, Part 1, p. 36.

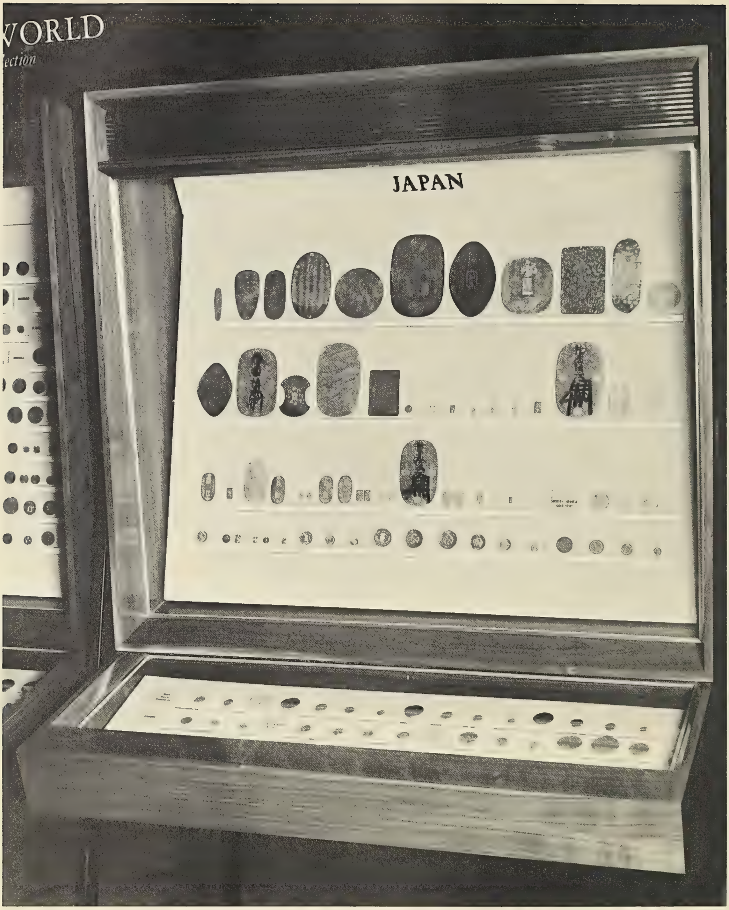

Fig. 5.—Japanese Gold Pieces from the President Grant collection on exhibit in the Smithsonian's Monetary History Hall, 1961.

items.[16] Shortly, however, the separate count was discontinued and not for many decades was numismatics again recognized as a separate division.

In 1893 the entire numismatic collection was withdrawn from display and stored after being crowded out by the expanding natural history collections. At this time an attempt was made to assemble a general collection of currencies of the world, and numismatic acquisitions were both numerous and varied. Some major additions to the Museum's numismatic holdings indicate the general growth trend of the collections. One of the most outstanding groups of coins received was a collection of rare Japanese gold and silver pieces (fig. 5) which came to the Museum in November 1886 together with other relics once owned by General Ulysses S. Grant. Details of this collection are given in Appendix VII.

Another major accession was a collection of Far Eastern coins bequeathed to the Smithsonian by George Bunker Glover. Received in 1897, this collection of 2,025 Chinese, Annamese, Siamese, Japanese, and Korean coins, amulets, and paper money was considered at the time to be the most perfect of its kind.[17] (At the same time, Paul Beckwith, who was versed in numismatics, was appointed as an aide.) The Glover collection formed the basis for Sir James Haldane Stewart Lockhart's three-volume study *The Currency of the Farther East from Earliest Times up to the Present Day* (Hong Kong, 1897–1898). During this period the Smithsonian obtained a variety of United States and foreign coins, paper currencies, and medals. Much significant numismatic material with association value was also added to the collections. Included are 16 gold and two silver medals awarded to Rear Admiral Robert E. Perry in recognition of his achievements in Arctic exploration and the group of six gold and 13 silver medals conferred on Commodore Matthew Fontaine Maury by foreign governments in recognition of his services to science and navigation.

The efforts made in the 1880s toward building an adequate numismatic library were not consciously continued. (For further information about the library and Smithsonian publications with numismatic connotations see Appendix VI.) The problem of exhibit space was partially solved by the introduction of upright cases, but still only a fraction of the numismatic collection could be exhibited and most of it remained in storage. The lack of space for numismatic displays continued generally unchanged until 1914. Room was made, however, for showing some 300 Polish coins dating from the late 14th to the mid 19th century which were presented by the Polish National Alliance. This display was arranged in 1912 by Theodore T. Belote (fig. 6), who had been appointed assistant curator in the Division of History in 1909.[18] His ap-

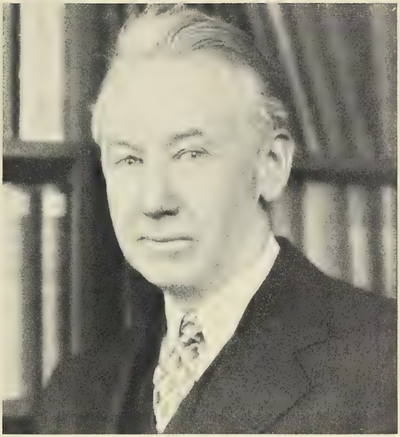

Fig. 6.—Theodore T. Belote (1881–1953), curator of the Division of History, Smithsonian Institution, 1908–1950 (photo courtesy Mrs. T. Belote).

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[16] *Report of the United States National Museum under the Direction of the Smithsonian Institution* [hereinafter cited as *USNM Report*], 1893, p. 121.

[17] *SI Report*, 1897, p. 15; *USNM Report*, 1897, p. 73; *The Numismatist*, vol. 11, 1898, pp. 77f.

[18] Born in 1881, on the Eastern Shore of Virginia, Theodore T. Belote studied at the University of Richmond and did graduate work at Harvard where he took his master's degree. He studied also at the Universities of Berlin and Leipzig and taught history at the University of Cincinnati before coming to the Smithsonian in 1908. After 42 years of service with the National Museum, he retired in 1950. He died on December 1, 1953, in Washington, D.C. Following is a short bibliography of Belote's numismatic papers which apply specifically to the national collection: "The Numismatic Group of the National Historical Collection," in *The Numismatist* (1925), vol. 38, pp. 534–539; "Medals of Award in the Historical Collection of the United States National Museum," op. cit. (1927), vol. 40, pp. 722–728; "Foreign Medals of Award in the Historical Collections of the United States National Museum," op. cit. (1929), vol. 42, pp. 123–126; "Hard Money in Ancient Times," *The World is Yours* (Feb. 19, 1940), vol. 1, no. 20, published by Columbia University Press in connection with the Smithsonian Institution Radio Program, 14 pp.

pointment provided a fresh opportunity for the development of numismatic collections in the Smithsonian, for Belote had particular inclinations toward this discipline. Also, in the years from 1910 to 1914, with the addition of a new museum building for natural history, space was gradually released in the Arts and Industries Building and the numismatic exhibit area was expanded. By 1914 Belote had finished selecting, classifying, cleaning, and labeling coins and medals for the display.

During World War I and in the early postwar years, the numismatic acquisitions were heavily weighted toward medals and decorations. Most noteworthy was the addition in 1918 of 1,200 medallic Lincolniana which had been assembled by Robert Hewitt.[19] This group included medals, coins, tokens, and badges relating to almost every notable event of Lincoln's career. While most of the material was of purely historical and numismatic interest, many pieces were of artistic merit as well, particularly those struck in commemoration of the Lincoln Centennial in 1909 (figs. 7–8). In 1919 the Museum started a collection of World War I awards, decorations, commemorative medals, German satirical issues, and emergency currencies which was systematically assembled over a period of several years.[20] In 1920, for instance, an attempt was made to gather a complete collection of Liberty Loan posters.

The most important event of this period was the transfer of the Mint collection from Philadelphia to the Smithsonian. The curator of the Mint collection, Dr. T. Louis Comparette, died suddenly in July 1922. When the Mints were closed to the visiting public that year, because of a robbery at the Denver Mint, the Secretary of the Treasury, Andrew W. Mellon, was prompted to suggest the transfer of the Philadelphia Mint's numismatic collection to Washington in a letter to Charles D. Walcott, Secretary of the Smithsonian, on February 8, 1923:

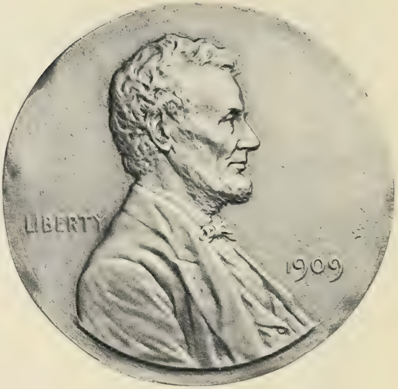

Fig. 7.—Lincoln Portrait by Victor D. Brenner, 1909. Preliminary model for coin design.

> It has recently been deemed advisable in the interest of safety to close the United States Mints to visitors. As you are aware, there is a large numismatic collection in the Mint at Philadelphia. Since the Mint is to be permanently closed to visitors the inspection of the collection by the public is no longer possible. There is an important and very beautiful selection of coins, tokens and medals, perhaps the largest and most complete numismatic collection owned by the Government. The logical place for this collection would seem to be in the National Museum in Washington, and I am writing to ask if you would consider it feasible to have the collection transferred there. In case you consider the undertaking favorably may I suggest that you designate a representative of the National Museum to inspect the collection in order that you may be advised as to its scope and importance, and as to other details involved in the proposed transfer.
>
> The Curator of the Mint at Philadelphia died several months ago, but we have made no special effort to fill the position for the reason that the removal of the collection to Washington has been tentatively considered for some time.
>
> The collection is under the jurisdiction of the Director of the Mint, and I shall be glad to instruct that officer to place before you all available information in regard to it. I am enclosing a Catalogue of the coins, tokens and medals which may be of interest to you in considering the proposed transfer of the collection from the Mint to the National Museum.

Formal acceptance by the Secretary of the Smithsonian Institution followed on February 19, 1923, and on February 28, Belote was authorized to inspect the collection at the Mint in preparation for its packing and transportation. Afterward, Belote re-

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[19] *USNM Report*, 1918, p. 27; *SI Report*, 1918, p. 30.

[20] *USNM Report*, 1919, p. 65; 1920, p. 25; 1921, p 135; 1922, p. 123. *SI Report*, 1919, pp. 27, 30; 1920, pp. 41, 132.

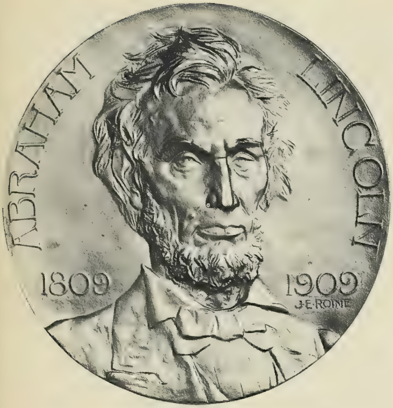

Fig. 8.—LINCOLN MEDAL by Jules Édouard Roiné, 1909.

marked: "I found that the size and importance of the collection has been very materially increased since my last visit to the Mint in Philadelphia and that the acceptance of this collection will place the National Museum in the front rank of the museums of the world so far as the science of numismatics is concerned." [21]

In 1923 the United States Mint collection was transferred from Philadelphia (figs. 9–11) to the Smithsonian Institution. This numerically extensive collection not only increased the holdings of the national cabinet, but, through the historical connotations of many of its pieces, also augmented the importance of this cabinet. (For the history of the Mint collection and the details and documents concerning the transfer see Appendix VIII.)

A total of 18,291 specimens were included in the transfer, increasing the holdings of the national numismatic collections from 21,523 to 39,814 items. In addition to the numismatic material, the Mint transferred 814 numismatic books selected by Belote from the specialized library at the Philadelphia Mint in December 1924.

As a result of the decision by Chief Coiner Adam Eckfeldt (fig. 12) and Mint Assayer William E. Du Bois (fig. 13) to retain the finest numismatic examples that were struck or appeared in deposit for recoinage, the Mint collection is rich in rare specimens. Foremost among these are early issues (figs. 14–15), early patterns (figs. 16–19), early gold proofs (figs. 20–24), great rarities in the gold series (figs. 25–29), historically important specimens (figs. 30–36), as well as rarities in the later pattern series (figs. 37–48). The Mint's retention policy included also the historically important private gold issues (figs. 49–56), as well as rare foreign strikings (figs. 57–60), medals (figs. 61–62), plaquettes (figs. 63–64), and decorations (figs. 65–66).

Despite these efforts, the United States coins series is not complete. "A cursory examination of the contents of the collection will reveal its exceedingly fragmentary condition," noted T. L. Comparette, curator of the Mint, in his "Cataloguer's Note" to the Mint catalogue.[22] There are very few branch mint issues and, even among the Philadelphia Mint coinages, regular strikings are often missing while many of the proof coins are present. To augment the holdings, there have been frequent purchases of ancient, medieval, and foreign coins as well as United States coins. A 1914 listing of 469 United States medals in the collection showed that, while the group was incomplete, official medals were well represented.

Another important contribution from the United States Treasury was several engraved steel plates used by the Confederate States government for the issuance of paper currencies in 1861. These plates for 5-, 10-, 20-, 50-, and 100-dollar notes were seized by Major General B. F. Butler at New Orleans in April 1862 and sent to the Secretary of the Treasury (fig. 67).[23]

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[21] For the importance of the collection, see *USNM Report*, 1923, pp. 126f.

[22] *Catalogue of Coins, Tokens, and Medals in the Numismatic Collection of the Mint of the United States . . .*, 1914 ed., p 675.

[23] *USNM Report*, 1926, p. 113.

NEW DEVELOPMENTS, 1923–1948

No special curator of numismatics was appointed after the transfer in 1923 of the Mint collection to the Smithsonian, and Theodore T. Belote, curator of the Division of History, remained in charge of the collections until 1948. They continued to increase—mainly through donations—from 40,285 pieces in 1924 to 45,802 in 1933, and by 1948 to 54,175 pieces.

Curator Belote noticed during the Depression the development of various forms of scrip and initiated an intense correspondence in an attempt to secure for the national collections examples of various local emergency issues. In many instances the response was prompt and it was thus possible to assemble 266 specimens issued from 1931 to 1933 by banks, business firms, municipalities, and other organizations in the United States.

Among the more important additions of medallic material received during the 25-year period 1923–1948 was a collection of nearly 300 medals and plaquettes assembled by the eminent American author and diplomat Brand Whitlock. Also during this period the American Numismatic Association loan collection was installed at the Smithsonian.

In the early twenties Moritz Wormser (fig. 68) conceived and promoted the idea of a display at the Smithsonian to be sponsored by the American Numismatic Association, of which he was president (1921–1926). The idea originated at the A.N.A. national convention in 1922 when Wormser delivered an address aiming to set forth the historical value and importance of numismatics. He made an impassioned plea for the recognition and development of numismatics through governmental support of the national collections and through the inclusion of the study of numismatics in university education. His well-documented address, a product of thorough study of the situation in foreign countries, was widely circulated as a special 16-page pamphlet. Wormser sent the pamphlet with a personal letter to, among others, A. Howard Clark, secretary of the American Historical Association and for many years a ranking official of the Smithsonian Institution, and Theodore T. Belote. A close and rewarding co-

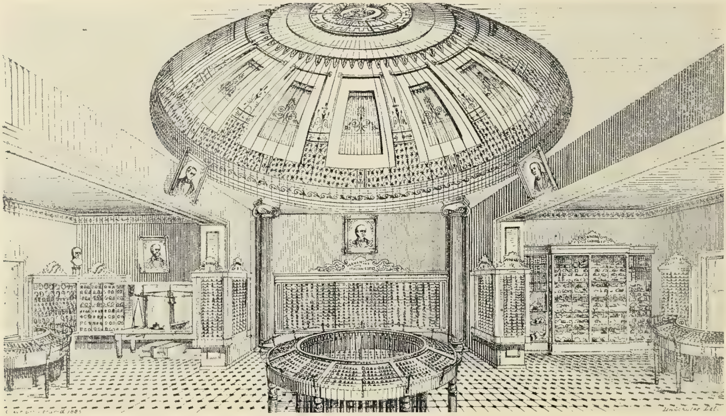

Fig. 9.—View of the Numismatic Display at the United States Mint in Philadelphia, 1885. (From A. M. Smith, *Visitor's Guide and History of the United States Mint*, 1885).

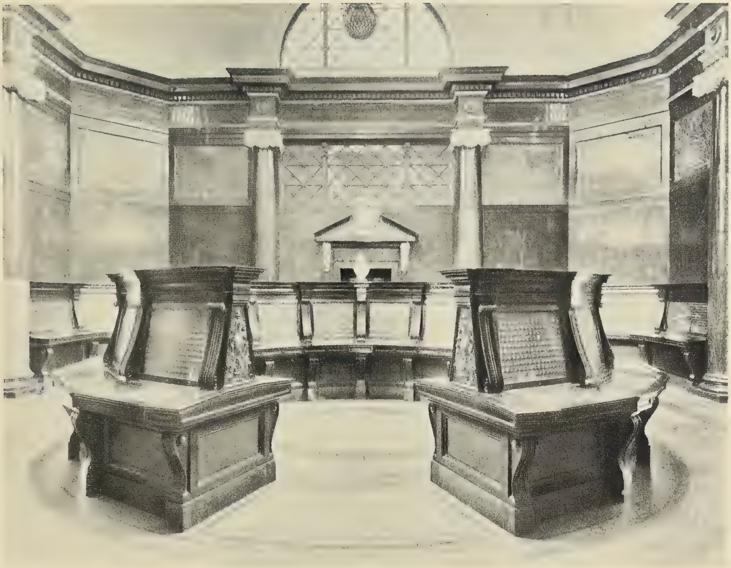

Fig. 10.—Numismatic Room in the new Mint building in Philadelphia, 1902 (from *Annual Report of the Director of the Mint,* 1902).

operation soon developed between Wormser and Belote. In retrospect it is clear that one central idea guided Wormser in all his actions—to increase the size and importance of the national numismatic holdings through joint efforts until it would rank with such great representative collections as those in London, Paris, and Berlin. He considered this as a mission of the American Numismatic Association, deriving from its national character and in accord with the purpose of its federal incorporation.

At the association's annual convention in 1925, a resolution was passed authorizing the president to appoint three persons—preferably residents of the Washington, D.C., area—as the "A.N.A. Smithsonian Committee" which would cooperate with the Institution on numismatic problems. The same resolution considered the establishment, through this committee, of a numismatic collection to be placed on loan exhibition at the Smithsonian. In 1927 an A.N.A. collection was started by means of a fund donated by Robert P. King of Erie, Pennsylvania. It was exhibited at the Smithsonian in 1928. Throughout the depression and until his death in 1940, Wormser continued to work at building up this loan collection. Since then it has continued to grow under the sponsorship of the association. At this writing plans are under way for the establishment of A.N.A. headquarters in Colorado Springs, Colorado. When this headquarters is established the entire A.N.A. collection will be transferred from the Smithsonian to that location.

A major change took place in the Smithsonian numismatic collection in 1931 when it was moved from its poorly lighted quarters (fig. 129) to a smaller but much brighter area of the Arts and Industries Building (fig. 130) where it remained until its transfer to the Museum of History and Technology.

RECENT HISTORY, 1948–1966

With the help of the continued interest shown by numismatic circles and particularly by the American Numismatic Association, the Division of Numismatics was formally established and Stuart Mosher (fig. 69), editor of *The Numismatist*, was appointed on August 27, 1948, acting curator of the Division. He held this post until his death in February 1956.[24]

The collections, which consisted of 54,175 specimens in 1948, had increased by 1956 to 64,522. This growth includes the famous Paul A. Straub (fig. 70) collection consisting of 1,793 gold and 3,855 silver coins.[25] In addition, Straub continued over the years to contribute to the national numismatic collections. The entire donation finally totaled 1,860 gold and 3,886 silver coins. (For details of the transaction see Appendix IX.)

The importance of this addition to the numismatic collections is of much more significance than simple numbers could tell. This collection was built up with discriminating taste and specialized knowledge over many years, in part with deliberate design to fill a very obvious gap in the Smithsonian's holdings. It covers the period from the 14th to the 20th centuries, ignoring minor varieties and insisting on a general representation of different types and particularly of the larger multiple units in gold (figs. 71–73) and silver (fig. 74).

During this period there were many other noteworthy donations such as a gift from the McCormick-Goodhart collection of 118 medals commemorating the 1739-1741 victories of Admiral Edward Vernon (fig. 75),[26] the seal press (figs. 76–77) and tools used by Edward Stabler,[27] the well-known Maryland diesinker and steel engraver, and 43 medals and decorations [28] awarded to Dr. William Crawford Gorgas (1854–1920) for his work as sanitation engineer with the Panama Canal Commission.

From February through September 1956 Mr. Mendel Peterson served as acting curator of the Division until the appointment in October of that year of the present curator. In 1957 followed the appointment of Mrs Elvira Clain-Stefanelli, first as assistant curator and in 1959 as associate curator.

New horizons were opened for the development of the national numismatic collections with the planning for an expanded exhibit program in the new Museum of History and Technology.

The broadening of the concept of numismatics along modern scientific lines and the departure from antiquated trends of thought dominated by metalism are worthy of note. Careful consideration was given to all changes of money economy from simple barter to deposit currency, which in complex modern financial transactions often replaces hard cash.

The exhibits built in accordance with these new concepts were opened in March 1961 in the Arts and Industries Building and after the completion of the Museum of History and Technology in 1964 were installed in October of that year in the Hall of Monetary History and Medallic Art. The staff of the Division of Numismatics had moved to the new location in March 1964. By that time it had been augmented by the addition of Mr. Charles D. Wilkinson, Mr. Carl H. Jaeschke, and Mr. R. LeGette Burris. Mrs. Cora L. Gillilland joined the staff in 1965.

There was a rapid increase in the holdings of the Division. From 32 accessions comprising 233 specimens in 1957, the accessions rose to 249 in 1966, while the total holdings climbed from 64,755 in 1957 to 199,747. It is impossible, however, to evaluate contributions to the national collections on the basis of numbers or quantities of the donations. In some

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[24] Born in Canada, Mr. Mosher settled in Buffalo, New York, in 1926, and became associate in numismatics at the Buffalo Museum of Science. While there he wrote his popular book, *The Story of Money as Told by the Knox Collection* (Buffalo, N.Y., 1936). He left Buffalo in 1935 for New York City where he was associated with Wayte Raymond and helped to edit *The Coin Collector's Journal*. He also was joint author with Wayte Raymond of *Coins of the World; the Standard Catalogue of Twentieth Century Issues* (New York, 1938). In addition, he joined the staff of the New Netherlands Coin Company. In January 1945 he became editor of *The Numismatist*. Among his publications is the very useful paper "Coin Mottoes and Their Translations" which appeared in *The Numismatist* in 1948 and as a reprint. He died on February 20, 1956. For his obituary see *The Numismatist*, 1956, p. 275.

[25] *USNM Report*, 1949, p. 75 indicates 1,808 and 3,844 respectively as total numbers; a recount established instead the numbers given above. See also, *SI Report*, 1949, p. 21.

[26] *USNM Report*, 1951, p. 55.

[27] *USNM Report*, 1951, p. 55; *SI Report*, 1951, p. 20.

[28] *USNM Report*, 1955, p. 17; *SI Report*, 1955, p. 23.

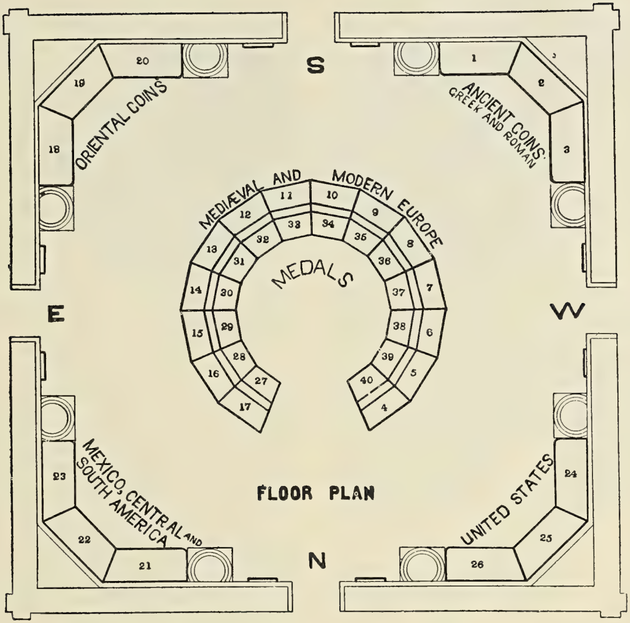
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Fig. 11.—Floor Plan of the numismatic exhibit at the Mint arranged by T. D. Comparette (from *Guide to the Numismatic Collection of the Mint*, 1913).

cases the gift of a single specimen will exceed in significance another contribution of thousands of items, because historical importance—not intrinsic value—is the primary consideration. Thus an heirloom from the Theodore Roosevelt family (fig. 86)[29] or from Mr. Kent Packard, a descendant of the noted engraver Christian Gobrecht, arouses special interest (figs. 94–97). A group of original sketches, designs on mica, and models prepared for the 1836–1838 coinage by Christian Gobrecht (figs. 79–82), as well as additional materials illustrative of the work of mint engravers William Kneass, J. B. Longacre, George T. Morgan (fig. 84), and William Barber are invaluable research materials for the study of die-sinking techniques in the United States since the early 19th century. Among important die trials is the 1836 obverse design by Gobrecht of a half dollar struck on an octagonal planchet (fig. 78). Two other unique documents worthy of note are the original dies prepared in 1861 by Robert Lovett, Jr., in Philadelphia, for the proposed striking by the Confederacy of a copper cent (fig. 85),[30] and the only surviving complete set of six Confederate "chemicograph" currency plates manufactured by S. Straker and Sons in London.

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[29] *USNM Report*, 1961, p. 52.

[30] *USNM Report*, 1962, p. 46; see also, John J. Ford, "The Confederate Cent," *The Coin Collector's Journal* (1951), pp. 9–14.

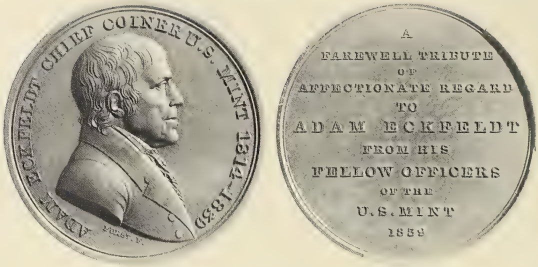

Fig. 12.—Adam Eckfeldt (1769–1852), chief coiner of the United States Mint.

The United States paper money collection has been considerably increased through numerous donations of Colonial notes—including some uncut sheets—obsolete state bank notes, a large and authoritative collection of Confederate notes, and Raphael P. Thian's album entitled "The Currency of the Confederate States. . . ." [31] Noteworthy is a copper plate dated September 26, 1778, used by the British in New York for counterfeiting 40-dollar Colonial notes (fig. 87).[32] Various phases of the history of United States paper money are illuminated by a few selected examples: two exceedingly rare "seal-skin" notes circulated in Alaska in 1816 by the Russo-American Company (fig. 88), a scrip for 6¼ cents issued by Gadsby's National Hotel in Washington in 1837 (fig. 89), a unique Sub-Treasury interest-bearing certificate of deposit for the amount of $10,000 issued in 1862 (fig. 90), and a United States 100-dollar gold certificate, 1877 (fig. 91).[33] The specimen printing of a 100,000-dollar gold certificate (fig. 92) is one from a large group of such printings of United States currency notes transferred by the Bureau of Engraving and Printing.

The remarkable growth in the medals section of the national collection reflects the recently increased interest in this field in the United States. Indicative of this growth are additions such as early Washington portrait medals, a hitherto unknown variety of an 1843 Indian peace medal in pewter distributed by a Missouri fur-trading company (fig. 93), a gift from Harvey G. Stack,[34] a group of early American medals depicting notable statesmen (figs. 94–97), and a unique gold John Paul Jones plaquette executed in 1906 by Victor D. Brenner, received from Mr. and Mrs. Isadore Snyderman.[35]

Particular importance attaches to authoritative specialized collections such as the Polish coins assembled by Andrew Zabriskie (fig. 107),[36] the Canadian and Newfoundland coinages received from the Honorable and Mrs. R. H. Norweb (fig. 119),[37] the vast paper money series issued within the Austrian Empire (fig. 121) coming from Mr. and Mrs. Mortimer Neinken, and especially Willis H. du Pont's famous Grand Duke Georgii Mikhailovich collection of Russian coins and medals (figs. 109–118, 124–125).[38] This Russian group is exceeded in extent and importance only by the holdings of the Hermitage Museum.

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[31] *USNM Report*, 1963, p. 41; *SI Report*, 1963, p. 37.

[32] Cf. Eric P. Newman, "Counterfeit Continental Currency Goes to War," *The Numismatist* (1957), vol. 70, pp. 5–6, 137–147; and by the same author, "The Successful British Counterfeiting of American Paper Money During the American Revolution," *The British Numismatic Journal* (1958), vol. 29, pp. 174–187.

[33] *USNM Report*, 1961, p. 53.

[34] *USNM Report*, 1963, p. 40; *SI Report*, 1963, p. 37.

[35] *USNM Report*, 1963, p. 41; *SI Report*, 1963, p. 37.

[36] *USNM Report*, 1962, p. 46; *SI Report*, 1962, p. 20.

[37] *USNM Report*, 1960, p. 41; 1963, pp. 40–41; *SI Report*, 1960, p. 18; 1963, p. 37.

[38] *USNM Report*, 1960, p. 41; 1961, p. 52; 1962, p. 46; 1963, p. 41; 1964, p. 52; 1965, p. 133; *SI Report*, 1960, pp. 17–18; 1961, p. 29; 1962, p. 20; 1963, p. 37; 1964, p. 31; 1965, p. 133.

Often large collections of a more general character have contributed considerably to the growth of the national coin cabinet. Such was the case with Mrs. Catherine Bullowa's donation of more than 21,000 items,[39] the 20th-century coins of the world of Mrs. Wayte Raymond [40] and Mrs. F. C. C. Boyd,[41] and the Frederick Hauck assemblage of 2,478 gold coins and medals (fig. 123).[42]

In no lesser measure additions of single, select items have often enhanced the research potentialities of the national coin cabinet. Among the ancient coins are many highly interesting pieces such as: a Celtic silver stater from the Danube region (fig. 99) bearing the name of "Sosthenes" in Illyric characters; an early Celtic gold ½ stater (fig. 100) showing a barbarized design derived from a posthumous stater of Lysimachus; an apparently unpublished small bronze coin struck by the Macedonian city of Amphipolis (fig. 101); a bronze coin struck in Macedon during the time of Gordian III (A.D. 238–244) representing two temples of Beroia (fig. 102); a bronze medallion struck at Bizya, Thrace, in the name of Philippus I (A.D. 244–249) showing a view of the city with temple and public building (fig. 103); and a large Roman bronze so-called *contorniate* (A.D. 356–399) depicting a view of the Circus Maximus in Rome (fig. 104).

Representing substantial increases in the medieval section are a very rare bronze *follaro* struck during the 10th century at Salerno, Italy (fig. 105) and the highly artistic bracteate of Falkenstein illustrating German Gothic art influences on the coinage of the 12th century (fig. 106). The 1574 necessity ¼ gulden of Leyden stamped on cardboard during the Spanish siege of that city is one of the first examples of paper used in European currency (fig. 108).

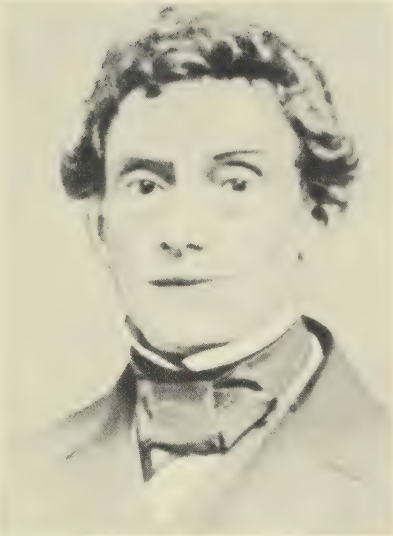
Fig. 13.—William Ewing Du Bois (1810–1881), Mint assayer.

The foreign paper holdings were virtually nonexistent but have been built up since 1956 to one of the leading collections in the world through substantial donations by Mrs. Catherine Bullowa, the Messrs. Stack, and especially Mr. and Mrs. Mortimer Neinken. The Hoscheck and Kubitschek collections from Vienna, Austria, of over 100,000 notes of the world, including one of the best specialized collections of Austrian notes, form the nucleus of this section in the national cabinet. A few highlights exemplify the historical value of many of these items: a Swedish note of credit, issued by the Stockholm Bank (fig. 120), is one of the first examples of bank notes printed in the western world; an extremely rare note issued by the Italians in the community of Osoppo in Lombardo-Venetia during the Austrian siege in 1848 (fig. 121); and another necessity note signed by General Charles G. Gordon in Khartoum, Sudan, during the siege by the Mahdi in 1884 (fig. 122).

The section of foreign medals has been built up systematically. An interesting touch was contributed by numerous additions of Russian medals of the 18th and early 19th centuries which came through the W. H. du Pont donation (figs. 124–125), by fine Swedish gold medals received from the F. Hauck collection (fig. 123), and by a group of Spanish-American proclamation pieces commemorating the advent of the last Spanish kings, presented by Mr.

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[39] *USNM Report*, 1959, p. 50.

[40] *USNM Report*, 1963, p. 41; 1964, p. 52; 1965, p. 133; *SI Report*, 1963, p. 37; 1964, p. 31; 1965, p. 133.

[41] *USNM Report*, 1963, p. 41; 1964, p. 52; 1965, pp. 132–133; *SI Report*, 1963, p. 37; 1964, p. 31; 1965, p. 133.

[42] *USNM Report*, 1965, p. 132; *SI Report*, 1965, p. 132.

Joseph B. Stack. The contemporary art medal was not forgotten and a fine representative group of foreign creations (fig. 126) has been added to the regular contributions received from the Medallic Art Company in New York. Of historical and technical interest is an obverse die used in 1565 for the striking of an English marriage medal of Mary, Queen of Scotland and Henry Darnley (fig. 127).

Finally, mention should be made of steady annual contributors such as various members of the Stack family, Mr. Willis H. du Pont, Mr. and Mrs. Mortimer Neinken, Mrs. Milton Holmes, and others. Through these regular and invaluable additions there has been a well-balanced increase of holdings within the various sections of the Division of Numismatics: coins and tokens; paper money; medallic art; documentation of the evolution of manufacturing techniques of coins, medals and paper currencies; and, as the most recent adjunct, documentation of the history of banking.

EXHIBITS

As the previous chapters have discussed the history and growth of the numismatic collections, this chapter gives a general view of the development of numismatic exhibits at the Smithsonian. Before 1860 these exhibits were few and casual. W. J. Rhees mentions only some Japanese gold and silver coins and some primitive media of exchange on display in the west gallery of the original Smithsonian Building.[43] Later, in 1886, the arrangement of the collection of medals and moneys of the world was begun and about 2,000 specimens were placed on exhibition in the north hall of the Arts and Industries Building, in an effort to show the monetary standards of different nations and to give the origin of various denominations.[44] Also in the exhibit was a series of bronze copies in duplicate of all medals struck by the United States Mint.[45] An exhibit was added in 1888 illustrating the money of Biblical times. Attention was also given to United States bonds and currency notes and, finally, to medals of reward and badges.[46]

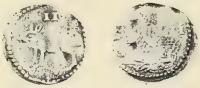

Fig. 14.—Twopence Piece of "Hogge Money" struck in the Sommer Islands (Bermuda) about 1616.

The exhibits illustrating the moneys of the world apparently were well received. The National Museum's *Annual Report* for the year 1890 emphasized the popular interest accorded these exhibits, evidenced by the many valuable loan collections of ancient and modern pieces. The report again stresses that the collection "is not limited to metallic currency, but includes paper currency and various substitutes for money." [47] Additional information on the scope of these displays of this period is provided by W. J. Rhees in his *Visitor's Guide to the Smithsonian Institution and U.S. National Museum in Washington, D.C.*, circa 1890.

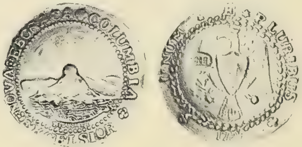

Fig. 15.—Gold Doubloon struck 1787 by the New York goldsmith Ephraim Brasher.

In 1891, despite the lack of display space, an exhibit was installed illustrating Indian shell money of the early colonial period and also showing shells used for wampum and wampum belts. This exhibit, arranged by Dr. R. E. C. Stearns, an associate curator, was accompanied by an instructive pamphlet, giving a detailed history of the manufacture and uses of shell money. The medallic history of the United States also was shown by means of official medals struck by order of Congress, medals commemorating local events, and medals and tokens delineating the history of Presidential campaigns.[48]

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[43] William J. Rhees, *An Account of the Smithsonian Institution, its Founder, Building, Operations, etc., Prepared from the Reports of Prof. Henry to the Regents, and Other Authentic Sources*, Washington, 1859, pp. 72–74.

[44] *USNM Report*, 1887, p. 12.

[45] *USNM Report*, 1886, p. 12.

[46] *USNM Report*, 1888, pp. 115f.

[47] *USNM Report*, 1890, p. 142.

These promising beginnings came to a sudden end in 1893, when numismatic exhibits were crowded out by the rapidly and vigorously expanding natural history collections, At this time the entire numismatic collection was withdrawn from display and placed in storage. After his appointment as an aide in 1897, Paul Beckwith attempted to solve the exhibit space problem by introducing the "use of upright cases with sloping diaphragms covered with olive-green velvet"[49] for coin display, but this was not completely successful. Only a fraction of the numismatic material could be displayed and most of it remained in storage—a situation generally unchanged until 1914—except for occasional temporary exhibits.

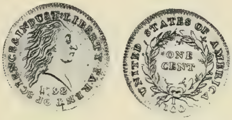

Fig. 16.—Pattern Copper Cent, 1792.

A new museum structure for natural history released space in the old Arts and Industries Building and provided fresh opportunities for the development of exhibits. By 1914 Theodore T. Belote (appointed in 1909 as assistant curator in the Division of History) had completed a selection of coins and medals and they were placed on exhibit in the northwest court (fig. 128).[50] More than 6,000 coins and medals were installed in 27 flattop cases, 8 of which were devoted to coins of the United States and its possessions, 11 to European countries, and 8 to Asia and Africa. Colonial American and United States coins, United States medals, and a series of "hard times" tokens were arranged in 12 historical and topical groupings. The foreign specimens were arranged alphabetically according to the countries of each continent. The European countries display included a group of 314 Polish coins, a large series of English and French historic medals, and a large set of fine Papal medals. Most of the other foreign medals came from the extensive H. Adams and G. B. Goode collections. In 1917 this display was augmented by the Thomas Kelly Boggs collection of more than 300 foreign decorations, medals of award, and badges. The display of African and Asiatic coins and medals was fairly well documented; the Chinese representation was impressive, numbering more than 2,000 pieces, most of which came from the George B. Glover bequest.

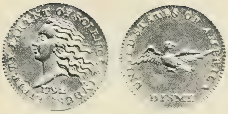

Fig. 17.—Pattern Disme in copper, 1792.

The greatest opportunity for expansion of exhibits came when the Philadelphia Mint collection, along with its display cases, arrived at the Museum in July 1923. The arrangement of this exhibit entailed considerable planning and intense work, which, according to Belote's report,[51] was divided into three phases: "The first of these included the removal from the west-north hall of the Arts and Industries Building of the collection of historical materials already occupying this space and its installation elsewhere; the second included the mechanical work of setting up in this space the cases received from the Treasury Department and preparing them for exhibition purposes; and the third included the actual installation of the numismatic collection" (fig. 129). The old exhibit cases from the Treasury Department were refurbished by adding lighting fixtures and substantial locks and made as suitable as possible for the installation of the valuable specimens. On March 31, 1924, the Secretary of the Smithsonian, Charles D. Walcott, wrote to Secretary of the Treasury Andrew W. Mellon that installation of the collection in the numismatic

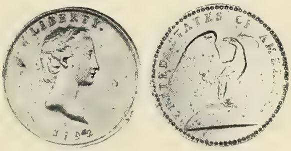

Fig. 18.—Pattern Quarter Dollar, 1792. Designed by Joseph Wright.

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[48] *USNM Report*, 1891, p. 151.

[49] *USNM Report*, 1897, p. 73.

[50] See also, *USNM Report*, 1914, pp. 32–35.

[51] *USNM Report*, 1924, pp. 126–129.

hall was practically completed. The coins were divided into five main groups: ancient Greece and Rome; Roman-German Empire and modern Germany; United States; Mexico, the West Indies, Central and South America; and modern European countries and their colonies.

During 1925, as a special cooperative project with the American Numismatic Association, assistance was provided in setting up special exhibits installed for Coin Week (February 15–22),[52] and similar arrangements for such exhibits were made in subsequent years.

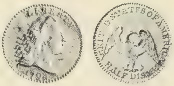

Fig. 19.—Pattern Half Disme in copper, 1794, an intermediate step between the half disme of 1792 and the regular issue of 1794.

A rearrangement of the collections took place in 1925 and 1926,[53] when the numismatic hall was divided into four alcoves. These alcoves featured coins from North, Central, and South America, and the West Indies; ancient, medieval, and modern coins of Europe; a display of United States medals; and an exhibit of European medals. In the center of the hall was a large circular case with electrotype copies of ancient coins on the inner circle, and modern European coins displayed in the exterior sections. All of the numismatic exhibits were revised in anticipation of the August 1926 meeting of the American Numismatic Association.[54] As mentioned previously, it was through the efforts of Moritz Wormser, president of the A.N.A., that funds were donated by Robert P. King of Erie, Pennsylvania, and a start was made on an A.N.A. collection which was placed with the Smithsonian on loan. The first exhibit from this collection was installed in 1928 in the numismatic hall.

During 1930–1931, the numismatic collection was moved to a smaller but better-lighted adjoining area (fig. 130),[55] where it remained until its transfer in 1964 to the Museum of History and Technology. The various sections of the collection were arranged in units to present coins of the United States; coins of Mexico, Central and South America; coins of ancient Greece and Rome; coins of the Holy Roman and German Empires; coins of various European countries; a series of American historical medals; and a series of European historical medals. There were also other displays of medals in an adjacent court which was referred to as the "philatelic and numismatic unit,"[56] and in the rotunda and in other areas.

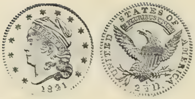

Fig. 20.—Quarter Eagle, 1821, proof.

An exhibit was added in 1932–1933 which featured coins, tokens, and paper currencies issued by state and local authorities, by commercial firms, and by private individuals from the Colonial period to the great depression in the thirties. Included in this special exhibit were Colonial and Continental paper currencies, so-called "hard times" tokens issued 1832–1844, and tokens of the Civil War period.[57] During 1934 a new case was assigned for the exhibition of United States patterns. Various series of United States medals previously on display in the rotunda were transferred to the numismatic hall, which made it necessary to remove the collection of scrip and emergency currencies from the exhibit. Along with this general rearrangement, United States military and naval decorations were moved from the west hall and placed on display in the rotunda of the Arts and Industries Building, and exhibits of foreign civil and military decorations were installed in the west hall.[58]

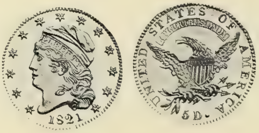

Fig. 21.—Half Eagle, 1821, proof.

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[52] *USNM Report*, 1925, p. 116.

[53] *USNM Report*, 1926, p. 116.

[54] *USNM Report*, 1927, p. 126.

[55] *USNM Reoprt*, 1931, p. 134; *SI Report*, 1931, p. 30.

[56] *USNM Report*, 1931, pp. 134f.

[57] *USNM Report*, 1933, p. 133.

[58] *USNM Report*, 1934, pp. 65f.

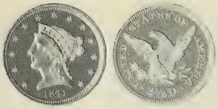

Fig. 22.—Quarter Eagle, 1841, proof.

Further progress was made during 1936 and 1937 when the numismatic hall was divided into an eastern and western section by a central north-south aisle.[59] The wall cases on the eastern side contained coins of the United States, Mexico, and Central and South America, while the floor cases featured ancient Greek and Roman coins. The wall cases on the west side contained coins of the various countries of Europe arranged in alphabetical order. Seven floor cases contained national and local United States medals. Two floor cases in the northwest corner of the hall were used for the special display of post World War I foreign coins lent by the American Numismatic Association, and this exhibit was enlarged to three cases in 1943.

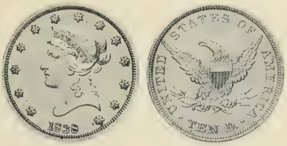

Fig. 23.—Eagle, 1838, proof.

During the forties, numerous additions and rearrangements took place. In 1944 improvements were made in the installation of the United States naval and military medals, showing their development from the Civil War period to World War II.[60] A display of coins and medals was added to the exhibits arranged in the foyer of the Museum of Natural History for the celebration of the Smithsonian Institution Centennial in August 1946. In the following year, under the joint auspices of the Smithsonian's Division of History, the Washington Numismatic Society, and the American Numismatic Society, a special display dedicated to Chinese coins of the 19th and 20th centuries was arranged in March in the foyer of the Museum of Natural History. The coins were the property of the well-known Chinese numismatist Kalgan Shih who was then visiting the city.[61] In January 1949 a temporary display of United States Presidential inaugural medals was placed on view in the rotunda of the Museum of Natural History.[62] Also during 1949 most of the 106 existing panels in the numismatic hall were cleaned, repainted, and provided with new labels for all coins and medals, and the entire coin exhibit was arranged in alphabetical and chronological order.[63] As a security measure, shatterproof glass was installed in 19 upright wall cases and burglar alarms were added in 39 cases (25 more cases were similarly secured in 1954).[64]

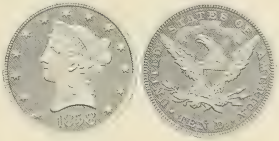

Fig. 24.—Eagle, 1858, proof.

By early 1950 approximately half of the 1,793 gold coins from the Straub collection were put on display, arranged in geographical and cultural divisions which, in turn, were broken down into alphabetical and chronological series. (For details of the Straub collection see Appendix IX.)

Also, at this time, a representative exhibit comprising about 200 foreign and United States orders and decorations was arranged, and a selection of "paper money issued prior to and during the American Revolution by 12 of the 13 original Colonies was installed." [65] About 1950 the American Numismatic Association's Moritz Wormser Memorial Collection, which had increased to 2,000 specimens, was relabeled and rearranged.[66]

Special exhibits were prepared for various occasions and during 1957 two displays were presented to public view in the coin hall: One depicted the history of the Reformation and the other was dedicated to 17th-century shooting matches in Saxony. For an exhibit on the United Nations in October 1957 in the

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[59] *USNM Report*, 1937, p. 73.

[60] *USNM Report*, 1944, p. 69.

[61] *USNM Report*, 1947, p. 67.

[62] *USNM Report*, 1949, p. 78.

[63] Ibid.

[64] *USNM Report*, 1950, p. 79; 1954, p. 11.

[65] *USNM Report*, 1950, p. 80.

[66] *USNM Report*, 1951, p 55

Museum of Natural History, the division of numismatics contributed an extensive display of recent coins of the world. The following year, a special display of Napoleonic medals was set up in the Arts and Industries Building.

Planning for rearrangement of the coin hall (fig. 131) was started in 1956 and by 1958 it was decided to redesign it completely. Detailed scripts and preliminary designs were worked out by the curator and by Mrs. E. Clain-Stefanelli. The final exhibit layouts were prepared by Harry Hart.

Meanwhile, several temporary displays were set up during 1959. In February an exhibit illustrating Abraham Lincoln's life, his political aims, and his achievements as shown on medals was installed in the coin hall.[67] In May, on the occasion of a visit of King Baudouin of Belgium, two displays were set up: one featured decorations, medals, and rare gold coins from Belgium; the other was dedicated to the achievements of Brand Whitlock as Ambassador to Belgium during World War I.[68]

The permanent displays in the coin hall were closed in July 1959 for dismantling in preparation for the installation of modernized exhibits: in the interim arrangements were made for setting up a series of temporary shows. Some of these, on view from July through September 1959 in the rotunda of the Arts and Industries Building, were topically dedicated to Washington, Lincoln, and Franklin D. Roosevelt; others featured United States paper currencies, medals of merit, and decorations.

While materials for regular exhibits were being prepared, the coin hall was used for several special exhibits. Louis Eliasberg of Baltimore, Maryland, lent his entire collection, including specially designed cases, for a display that was on view from May 1 through August 15, 1960. It was distinguished for its "completeness of the United States series, superb condition of the coins, and attractive presentation."[69] An exhibit illustrating the life and military exploits of Peter the Great was composed of a selection from the Willis H. du Pont gift of Russian coins and medals formerly owned by the Grand Duke Georgii Mikhailovich of Russia.[70] A selection of 250 masterpieces of ancient Greek coins, on loan from a famous private collection in Boston, was placed on public view in December 1960; it included outstanding examples from the 7th to the 2nd centuries B.C.[71]

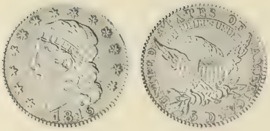
Fig. 25.—Half Eagle, 1815.

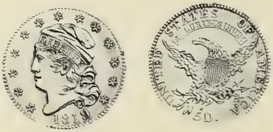
Fig. 26.—Half Eagle, 1819.

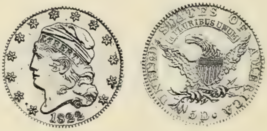
Fig. 27.—Half Eagle, 1822.

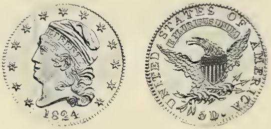
Fig. 28.—Half Eagle, 1824.

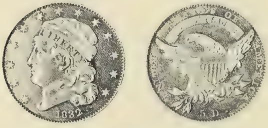
Fig. 29.—Half Eagle, 1832.

The completely renovated hall of monetary history and medallic art (fig. 132) was opened on March 18, 1961, with formal ceremonies attended by govern-

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[67] *SI Report*, 1959, p 41.

[68] *USNM Report*, 1959, p. 41.

[69] *USNM Report*, 1960, p. 26; *SI Report*, 1960, p. 43.

[70] *USNM Report*, 1960, p. 27; *SI Report*, 1960, p. 43.

[71] *USNM Report*, 1961, pp. 31–32.

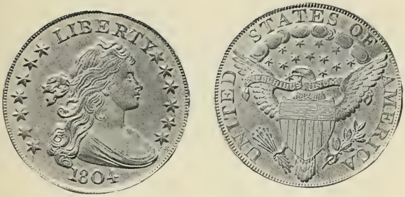

Fig. 30.—Silver Dollar, 1804, "class I" variety struck in 1834–1835.

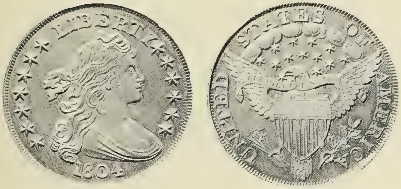

Fig. 31.—Silver Dollar, 1804, unique "class II" variety, with plain edge, struck in 1858–1859 over Swiss 5-franc shooting piece.

mental dignitaries and distinguished numismatists.[72] Both in concept and design the newly renovated hall was in bold contrast to the old (fig. 131). Bright, internally lighted cases replaced the massive wooden ones which had been dependent on daylight or ceiling fixtures for illumination. Attractive display panels were either decorated and illustrated with background art work and labels done by silk screening or covered with linen fabric. The main display in the new hall was dedicated to monetary history—from primitive barter to modern monetary systems—and traced the development of money as an integral aspect of society. Displays of coins, tokens, and paper currencies were arranged in their historical and cultural context, rather than by conventional classifications. Special emphasis was given to the various forms of currencies of North America and their role in the economic and political growth of the United States.

The first half of the display showed significant phases in the evolution of money economy in the Western world (fig. 133): early economies; the first coins; the Hellenic world; ancient Rome; the Byzantine Empire; the penny (fig. 134); the revival of gold; groats and testons; the dollar; the New World: barter on the frontier; Colonial money, 1607–1764; spirit of independence, 1764–1787; building a nation; the United States Mint; economic adjustments, 1812–1860; United States coin designs; war and reconstruction, 1860–1873; rise of modern America, 1873–1900 (fig. 135); and the 20th century. Special topical displays completed the basic monetary history exhibit, and among the themes illustrated were the origin of coin names, the Reformation (fig. 136), Confederate currencies, and state bank notes. Also on display was a reconstruction of a coin stamper designed by Leonardo da Vinci (fig. 137) which emphasized the introduction of mechanization in coining techniques. This machine was reconstructed for the Smithsonian Institution by the International Business Machines Corporation. Prominently displayed in the renovated hall were the United States Mint collection and the noted Straub collection of coins, which together include the world's largest display of gold coins, and a group of oversized multiple talers of the Brunswick duchies. Also featured were the Japanese gold and silver coins from the President Grant collection.

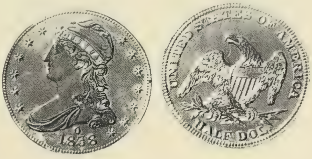

Fig. 32.—Historical 1838 Proof half dollar struck at the New Orleans Mint. The first 50-cent piece issued by a branch mint.

Displayed in two table cases were selections from the Willis H. du Pont donation of Russian coins illustrating coins issued by the Tsars Peter the Great, Peter II, and Anna as well as the political aims of Peter the Great evidenced on medals.

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[72] *USNM Report*, 1961, pp. 29–33, ill.; *SI Report*, 1961, p. 13; see also, "Smithsonian Institution Numismatic Display, Extension of Remarks of Hon. A. Willis Robertson of Virginia in the Senate of the United States," *Congressional Record* (Monday March 20, 1961), A1887–8; V. Clain-Stefanelli, "Hall of Monetary History and Medallic Art, Smithsonian Institution, Washington, D.C.," *Museum* (1962), vol. 15, no. 3, ill., with French, Spanish, and Russian abstracts, pp. 191–196, also pp. XXVII, XXXII; "Monetary History and Medallic Art a the Smithsonian Institution, Washington, D.C.," *Numisma* (Madrid, 1965), vol. 15, no. 75, pp. 31–48.

In 1962 a specially designed semiautomatic case was installed on an experimental basis. Its 40 mobile trays were suspended between continuous chain devices (fig. 138). By pushing electrical contacts, the visitor could rotate the trays and examine at close range each of the several hundred coins which were displayed in this case.[73]

All labels and background art work in these exhibits, instead of being typewritten or hand painted as previously, were silk-screened. The results were excellent even for the smallest specimen labels.

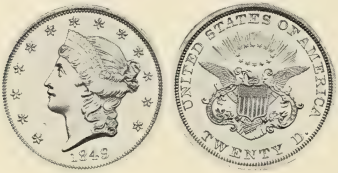

Fig. 33.—The Unique 1849 Double Eagle, pattern for the 20-dollar gold pieces first minted in 1850.

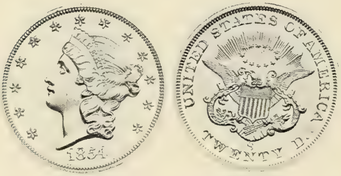

Fig. 34.—Unique Proof Double Eagle, 1854, San Francisco Mint.

The display cases were provided with cold-cathode internal lighting. The light boxes were equipped with specially designed lenses of Lucite (methacrylate) for maximum light distribution. These lenses also serve as filters for some of the more damaging radiations, their filter properties for ultraviolet being optimal at a wavelength of 350 millimicrons The specially designed cases are equipped with self-locking folding braces and ¼-inch polished safety plate glass.

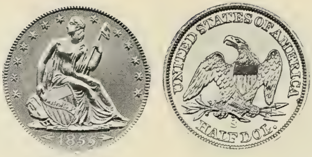

Fig. 35.—Proof-finish Half Dollar, 1855, first specimen struck at San Francisco Mint.

Mounting coins for display has always presented a challenge. Whenever possible, they were mounted first in tightly closed individual boxes made of cellulose triacetate K IV. These are attached to the display panel with small pieces of "Velcro," which consists of a strip of nylon hooks which adheres to another strip of nylon loops. When pressed together the hooks and loops engage, creating a secure and easily adjustable fastener. This method permits easy removal and replacement of display objects. In addition, by this mounting method the coins are raised against the background which accentuates them and produces a very attractive overall effect. Where the size or shape of a specimen precludes the use of boxes, the item is often secured in place with a special paraffin wax.

The windows of the display room in the Arts and Industries Building were covered with filters which allowed only 8 percent light transmission, thus reducing the danger of harmful radiations and maintaining a low general light level in the exhibit area. Disturbing glare and mirror effects were also reduced, and the individual internal lighting of the cases was enhanced. This total lighting arrangement brought

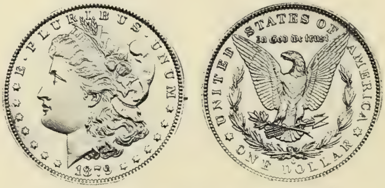

Fig. 36.—Proof-finish Silver Dollar, 1879, specially struck on the occasion of the February 20 reopening of the New Orleans Mint.

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[73] *USNM Report*, 1962, p. 28.

out details of coin design more effectively than high-level room lighting. The same principle applies to the current numismatic display in the Museum of History and Technology, where external natural light is no longer a problem.

With the assistance of the Medallic Art Company and the United States Mint, a display of contemporary United States medals was prepared in November 1963 in the Hall of Monetary History and Medallic Art.[74] A unit illustrating the traveler's cheque and its history was set up in February 1964, using materials made available by the American Express Company, the Bank of New Zealand, and Kenneth L. Kelly.[75] An exhibit featuring original mint models and designs for the Kennedy half dollar was opened in March 1964 through the courtesy of the director of the Mint.[76]

In April 1964 a large display was installed using material received from the Mortimer and Anna Neinken collection. It illustrates the evolution of paper money in Austria from the 18th century to the newest monetary reforms of the 20th century.[77] Two new exhibits, the "Origin of Coin Names" and State Bank issues in the United States, were set up in January 1964 in the numismatic hall.

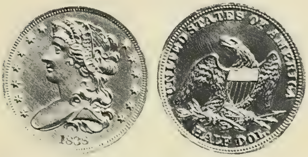

Fig. 37.—Unique Pattern Half Dollar, 1838. Draped bust of Liberty probably designed by William Kneass.

All the numismatic displays in the Arts and Industries Building were moved to the new Museum of History and Technology where the hall of numismatics was opened on October 23, 1964. While the new layout differs in many respects from the previous one, the general character of the exhibit remains the same (fig. 139).

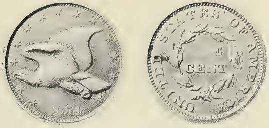

Fig. 38.—Pattern Flying Eagle Cent, 1854, in copper. One of three known surviving pieces.

From November 1964 through January 1965 a special exhibit on "Israel's Ancient History Through Its Coins" featured the internationally famous collection of ancient coins of Judaea collected by Mr. Adolph Reifenberg, author of the standard reference book of ancient Jewish coins.[78] "Miniature Masterpieces of Ancient Greek Coin Engraving" was the title of another special display (October 1964–March 1965) consisting of select pieces from the Dr. Leo Mildenberg collection, Zurich, Switzerland. Maps, photographs of individual coins, and background material were used extensively in these exhibits.

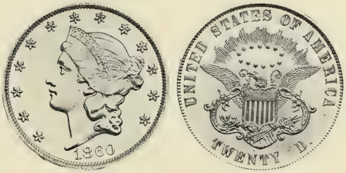

Fig. 39.—Unique Gold Pattern Double Eagle, 1860. Reverse designed by Anthony C. Paquet.

Another temporary display, arranged through the courtesy of the Buenos Aires Mint of Argentina (Spring 1965), illustrated coins and paper currencies of this Latin American country, as well as many original models for 19th-century coins of Argentina.[79]

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[74] *USNM Report*, 1964, p. 29; *SI Report*, 1964, p. 63.

[75] Ibid.

[76] *USNM Report*, 1964, p. 29; 1964, p. 137; *SI Report*, 1964, p. 63; 1965, p. 137.

[77] Ibid.

[78] *USNM Report*, 1965, p. 137.

[79] Ibid.

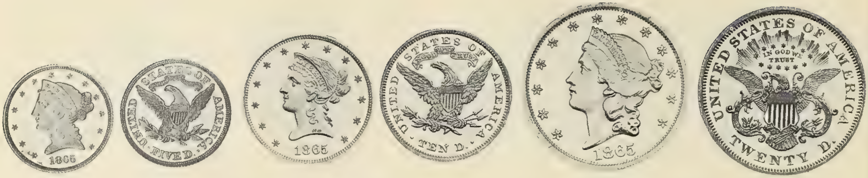


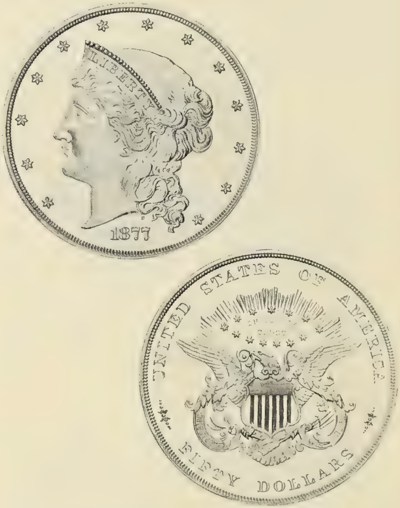
Fig. 40.—Gold Pattern Half Eagle, eagle, and double eagle, 1865. Only two of each are known to exist. Use of motto "In God We Trust" officially adopted in 1866 on United States coins.

In 1964 a geometric lathe, used in tracing the intricate rosette-like designs used on currencies and documents of value, was received from the Security-Columbian Banknote Company, Philadelphia. A new permanent feature in the hall was arranged in the fall of 1964 with a selection of contemporary artistic medals from Europe, featuring prominent artists of France, Germany, Italy, and Greece.[80]

On the occasion of the James Smithson Bicentennial celebration, September 1965, a special display was set up featuring Smithsonian Institution award medals. This included original models as well as bronze strikings of the new Hodgkins medal designed by Albino Manca from New York, and the Smithsonian award medal by Paul Vincze from London.

"Our New Coinage" was the title of a display arranged in September 1965, in cooperation with the United States Mint, showing two sets of experimental strikings of "clad" material prepared in 1965 at the Mint for the President's approval. Over 400 United States and foreign gold coins and medals from the Frederick A. Hauck donation were selected for an exhibit arranged in December 1965 in another new semi-automatic case with rotating trays. Electronic devices prevent unauthorized access to the material on exhibit.

Fig. 41.—Fifty Dollar Gold Pattern, 1877, reflecting California's interest in the issuance of gold coins in denominations up to $100.



Outside Participation

Over the years, numismatic displays have been made available by the Smithsonian Institution to various national and international expositions and local exhibits. Among these were:

Centennial Exposition at Marietta, Ohio, July 16–21, 1888. A group of 78 United States medals.[81]

Columbian Historical Exposition at Madrid, Spain, summer and fall 1892. A series of American Colonial coins—medals illustrating the Colonial period and the

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[80] Ibid.

[81] *USNM Report*, 1889, gives on pp. 182–183 an itemized listing of these medals. Cf. also *SI Report*, 1889, p. 53.

Revolutionary War, and medals commemorative of political and civic events—together with a large series of paper money extending from the early days of the American Colonies down to the national currency issues.[82]

World's Columbian Exposition at Chicago, 1893. Nearly 600 medals illustrative of American history from the earliest Colonial days through the Revolutionary War to contemporary events and including medals in memory of eminent Americans. Also a collection of "metallic money of the colonies prior to the establishment of the United States Mint," a collection of American Colonial and Continental paper money, state and private bank notes, and scrip issued by merchants.[83]

Cotton States and International Exposition at Atlanta, Georgia, 1895. Principal coins circulating in the North American Colonies from 1525 to the establishment of the United States Mint in 1793; medals commemorative of the Revolutionary War; and coins mentioned in the Bible.[84]

Tennessee Centennial Exposition at Nashville, Tennessee, 1897. Principal coins in use since 1652 in the North American Colonies and in the United States up to contemporary issues, including wampum, private gold coins from Georgia, North Carolina, and California; medals commemorative of events in the Revolutionary War and the War of 1812; medallic portraits of the Presidents of the United States.[85]

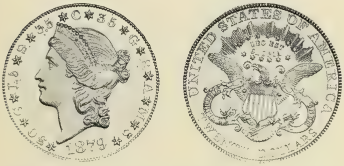

Fig. 42.—Copper Trial Piece for "metric" double eagle, 1879, reflecting attempt in Congress to adopt the metric system.

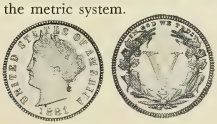

Fig. 43.—Unique Pattern 5-Cent Piece, 1881, bearing motto "In God We Trust."

Alaska-Yukon-Pacific Exposition at Seattle, Washington, 1909. An exhibit on on the medallic history of the United States.[86]

Sesquicentennial Exposition at Philadelphia, 1926. A series of medals.[87]

Washington Cathedral spring festival at Washington, D.C., May 10–12, 1945. A special exhibit on the evolution of Christian symbols on coins, consisting of 50 photographic prints showing coins arranged in chronological sequence from Constantine the Great to 1800.[88]

Theodore Roosevelt Centennial Exhibition at the Library of Congress, Washington, D.C., May 1958. Commemorative medals and plaques.[89]

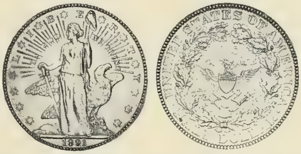

Fig. 44.—Pattern Half Dollar, 1891, obverse showing Columbia standing. Designed by Charles E. Barber.

Ibero-American Numismatic Exhibition at Barcelona, Spain, November 24–December 7, 1958.[90] United States commemorative gold and silver coins illustrating the historical development of the country; a complete series of official medals portraying the presidents of the United States; a large number of medals, plaquettes, and original models dating from 1889 to 1920 designed by the noted American medallist Victor David Brenner, as well as a selection of medals illustrating twenty years of modern medallic art in the United States.

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[82] *USNM Report*, 1892, p. 115. Cf. also, *SI Report*, 1893, p. 21.

[83] *USNM Report*, 1893, p. 121.

[84] *SI Report*, 1895, p. 632; also described in Cyrus Adler and I. M. Casanowicz, "Biblical Antiquities. A Description of the Exhibit at the Cotton States International Exposition, Atlanta, 1895," in *USNM Report*, 1896, pp. 943–1023 + 46 pls.; pp. 982–988 are dedicated to "A Selection of the Coins of Bible Lands."

[85] *SI Report*, 1898, p. 99; *USNM Report*, 1897, p. 73; *Report on the United States Government Exhibit at the Tennessee Centennial Exposition, Nashville, 1897*, Washington, 1901, pp. 119f.

[86] *SI Report*, 1909, pp. 81–83; and *USNM Report*, 1909, p. 57.

[87] *SI Report*, 1926, p. 48.

[88] *USNM Report*, 1945, p. 77.

[89] "The Theodore Roosevelt Centennial Exhibit," *The Library of Congress Quarterly Journal of Current Acquisitions* (May 1958), vol. 15, no. 3, pp. 106–164, especially p. 129, no. 94; pp. 130f., no. 100; p. 135, no. 121.

[90] *USNM Report*, 1959, p. 41.

National Numismatic Convention at Boston, August 24–27, 1960.[91] Die-sinking techniques at the United States Mint during the early 19th century; United States patterns; and Peter the Great's life and military exploits as illustrated on 18th-century medals.

Lincoln Museum at Washington, D.C., spring 1961. The history of the Medal of Honor.

Hancock County Centennial Exhibition at Weirton, West Virginia, March 1963, on the occasion of the West Virginia Centennial Celebration. Coins, paper money, and tokens used in West Virginia in 1863.

CARE OF THE COLLECTIONS

Equally as important for museum purposes as the acquisition and exhibition of numismatic specimens is the care and maintenance of these specimens, which includes not only their proper handling and conservation, but frequently also involved and difficult problems of restoration and technical examination and analysis.

Little is known about the care of coins and medals in the early years of the national collections except that no guiding policies are apparent and the practice was largely a matter of the attitude of the individual to whose care the specimens happened to be entrusted. The earliest evidence of any systematic approach to the problem appears in the work of Theodore T. Belote in preparing a reorganization of the exhibits in 1914. At that time he saw to the cleaning of every coin and medal to be displayed, but even of this no details are given as to the methods he employed. We do know, however, that the storage of the reference collections posed serious problems for him, and Belote decided to arrange them in alphabetical order according to the donors and lenders. He dedicated a considerable amount of time to this task which was completed in 1916.[92]

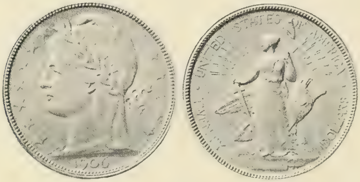

Fig. 45.—Unique Pattern in Gold of double eagle, 1906. Designed by Charles E. Barber.

Over the next two decades the lack of a numismatist and a trained staff, an ever-increasing workload, and general neglect of the hall led to continuing deterioration of the coins and medals on display as well as in the reference collections. There is a report that mentions the cleaning of the silver coins in 1937,[93] but the situation became so intolerable by 1948 that the American Numismatic Association appointed a committee to consult with Museum officials on the proper preservation and display of the national coin collection.[94]

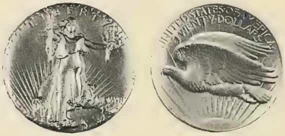

Fig. 46.—Experimental Double Eagle, 1907, by Augustus Saint-Gaudens, struck on 10-dollar size planchet. The only two surviving specimens are in the Smithsonian.

The committee met in July at the Museum and there achieved full cooperation and a complete agreement on remedies. Dr. William Blum, of the Electrodeposition Section of the National Bureau of Standards, and his assistants conducted research to find the easiest and safest methods for removing dirt and tarnish from the surface of silver coins and the best method for protecting all the numismatic items.[95]

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[91] *USNM Report*, 1961, p. 32.

[92] *USNM Report*, 1915 p. 33; 1916, p. 26.

[93] *USNM Report*, 1938, p. 74.

[94] Considerable material concerning the committee and results of its activity has been consolidated in a file entitled "William Guild and Stuart Mosher" and consists of the old United States National Museum file numbers 175 877, 176 221, 182 106. The file consists of correspondence and memoranda from May 14, 1947, through January 28, 1949.

[95] *USNM Report*, 1948, p. 79.

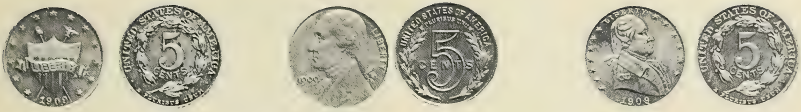

Fig. 47.—Five-Cent Patterns, 1909, some with portrait of Washington.

Because of the lack of trained personnel the entire collection was cataloged only superficially. During the years 1923–1948, however, Belote and James R. Sirlouis, a scientific aide, prepared a detailed listing of the United States coins transferred to the Museum from the United States Mint.[96] In 1944 the numismatic reference collections were installed in two rooms at the north end of the Arts and Industries Building.[97] A vault provided with an electrical alarm system was prepared for the storage of the collections two years later.[98] Each of these measures marked a slow but steady progress toward the establishment of the national numismatic collections as a clearly defined unit under its own curator.[99]

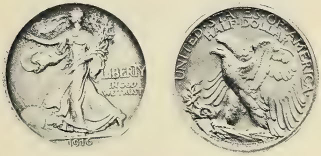

Fig. 48.—Pattern Half Dollar, 1916. Designed by A. A. Weinman.

The grouping of specimens in the reference collections according to accessions—a practice formerly in general use in the Division of Numismatics—was abandoned in 1956, and all specimens were arranged by subjects. State bank notes, for example, were grouped by states, banks, denominations, types, and then by dates. This kind of rearrangement of the collections was particularly time-consuming because many of the specimens had no identification as to their accession and catalogue numbers, or even their subject classification.[100]

An extraordinary effort was made in 1949 in cleaning the 4,200 silver coins on exhibit. Upon Dr. Blum's advice a 5 percent solution of sodium cyanide was used to remove the tarnish, after which the coins were carefully washed and dried. A group of 100 coins was then lacquered experimentally with Krylon,[101] and this method of protection against tarnish was adopted for the entire collection. Unfortunately, however, unskilled technical assistants often used the lacquer to excess with detrimental results to the appearance of some of the specimens.[102]

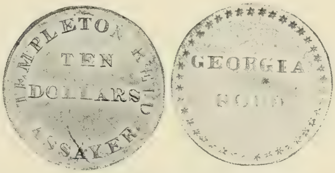

Fig. 49.—Ten-Dollar Gold Piece issued by Templeton Reid in Lumpkin County, Georgia, 1830. A product of the first "gold rush" in the United States.

This method of spraying the coins and medals with Krylon was re-examined after 1956 and the results were not considered fully satisfactory. Frequently the lacquer would "build up" around fine details and give an unnatural, glossy, and unesthetic look, especially to bronze coins and medals. In addition, Krylon cannot be readily removed if aged,[103] and sometimes resists prolonged applications of thinners or solvents. Immersion in boiling water may be effective in removing old coats of lacquer, because of the different coefficients of expansion of metal and lacquer. The use of low-pressure aerosol sprayers for the application of Krylon lacquer was therefore discontinued, and experiments were conducted spraying conveniently thinned lacquers with compressed air at about 40 psi.

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[96] Ibid.

[97] *USNM Report*, 1944, p. 70.

[98] *USNM Report*, 1946, p. 76.

[99] The *SI Report*, 1947, mentions at page VIII for the first time the "Section of Numismatics," Theodore T. Belote in charge.

[100] *USNM Report*, 1958, pp. 48f.

[101] *USNM Report*, 1949, p. 77 and op. cit., 1952, pp. 51f.

[102] *USNM Report*, 1956, p. 18.

[103] *USNM Report*, 1958, p. 49.

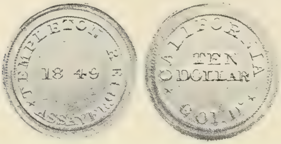

Fig. 50.—Unique 10-Dollar Gold Piece issued by Templeton Reid in California, 1849.

Through the cooperation of the Union Carbide Corporation, the opportunity was given the Division of Numismatics to test a new and promising method of protecting silver coins against corrosion. The product tested is a low-viscosity solution containing 7.5 percent silicone solids in a solvent system formulated primarily for spray application.[104] The results were satisfactory mainly for protecting bright, brilliant objects. Matt surfaces, especially of bronze medals and coins, should not be coated using this or any other product currently available because of the resulting "wet" appearance. The coating obtained was absolutely clear and no more than approximately 0.05 mils thick. The protective film may be readily removed with acetone, butyl Cellosolve, methylene chloride, or other similar solvents.

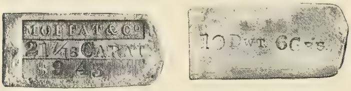

Fig. 51.—Unique Gold Ingot for 9.43 dollars issued by Moffat & Co. in San Francisco.

Potassium cyanide is frequently used for removing tarnish from silver coins, but it is dangerous and not recommended. A method used to clean daguerreotypes was tried on coins and found to be satisfactory. This cleaning solution consists of Thiourea (70 grams), phosphoric acid (85 percent, 80 cc), non-ionic wetting agent (Photoflo, 2 cc), and distilled water (enough to make 1 liter). After cleaning, the coins must be carefully rinsed in running water, followed by a mild soap solution, then rinsed again and finally washed in distilled water.[105]

The ion-exchange process has been used on a large number of communion tokens made of lead that were encrusted with carbonate. "Rexyn RG 50 (H)" of the Fisher Scientific Company was first used experimentally by the Division of Numismatics in 1960. After treatment the tokens were given a protective coating of wax.

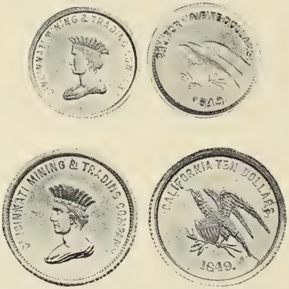

Fig. 52.—Five- and 10-Dollar Pieces issued by the Cincinnati Mining and Trading Co., 1849.

Ultrasonic cleaning was used successfully to clean several steel punches. It was found that any loose material was slowly knocked away by cavitation until only the base metal remained. Caution must be exercised, however, against indiscriminate use of this method for cleaning coins and medals made of bronze or other such metals for it could damage the objects.

An electrolytic apparatus was installed in 1958 for cleaning tarnished and corroded coins. In the electrolytic cleaning process, by the action of the electric current, the corrosion process is reversed and the metal is redeposited while the intruding ions are displaced into the bath.

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[104] *USNM Report*, 1962, p. 56.

[105] Charles Van Ravenswaay, "An Improved Method for the Restoration of Daguerreotypes," *Image* (1956), vol. 5, no. 7, p. 158. This method had been developed at the Missouri Historical Society and was adopted at the George Eastman House where we learned about its practical application.

For storing paper currencies rigid controls were introduced in the use of various holders commercially available. Unfortunately, it was found that some of the acetate and di-acetate films used for their manufacture were not sufficiently stable and were harmful to paper. Invaluable help in this preservation project was received from Dr. H. A. Pace of the Research Division of the Goodyear Tire and Rubber Company, Akron, Ohio, and from the Film Department of E. I. du Pont de Nemours & Co., Wilmington, Delaware.

Through the cooperation of Dr. Pace it was also possible to conduct fade-ometer tests of currency samples partially covered with quarter-inch Plexiglas filters and aluminum-foil masks. An exposure of 132 hours was used, and dyes were considered fadeproof if no perceptible change occurred after 100 hours of exposure. The tests proved that, in addition to light filters, controlled ambient conditions are necessary to assure maximum protection for paper currencies on display. It appears that success has been achieved in protecting paper documents of value and ribbons of decorations from the harmful effects of light and other ambient conditions by eliminating sulphur dioxide from the atmosphere,[106] and through impregnation with phenantrenone.[107]

TECHNICAL EXAMINATION OF MATERIALS (NONDESTRUCTIVE ANALYSIS)

The Smithsonian is frequently faced with the problem of determining the specific composition of coins and medals. One of many methods used in this research is electro-spectrographic analysis, but electric sparks may damage the surface of a coin. X-ray spectrography, however, is harmless to the specimen. This method permits examination of the coin, giving the composition of a thin surface layer only. It has the advantage that it can be done in 10 to 20 minutes with an accuracy of a few tenths of a percent.[108]

The method is of distinct practical use. A half eagle struck in 1849 at San Francisco by Norris, Grieg, and Norris had been condemned by several experts as a counterfeit because of its unusual "rippled" surface. When submitted to the Division for examination, certain details were noticed which indicated that the coin was authentic and that a more thorough investigation was warranted. Through the cooperation of the RCA laboratories the composition of this piece was tested and compared with that of other similar coins preserved in the United States Mint collection since 1850. The results obtained with fluorescent analysis equipment showed that in addition to gold, both silver and tin were present in considerable quantities in all specimens tested, and there were traces of iron as well. The presence of tin in all specimens tested was, of course, diagnostic and proved that all pieces examined were minted from an alloy of identical origin.

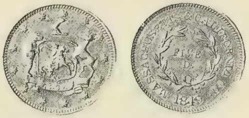

Fig. 53.—Five-Dollar Gold Piece issued by the Massachusetts and California Co., 1849.

Once the special composition of the alloy becomes widely known, counterfeiters may, of course, take advantage of this knowledge, and other non-destructive tests may have to be devised from time to time. Arrangements are being made, for example, for neutron-activation tests. These involve the irradiation of coins to be analyzed in a neutron pile. The gamma-radiation resulting from the neutron bombardment is characteristic in wavelength and half-life according to the content of the specimen. The radiation must be sorted out and measured carefully in order to ascertain the composition of the object.

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[106] Hans Kotte, "The Durability of Paper," *Allgemeine Papier-Rundschau* (1956), no. 12, pp. 577–579.

[107] John O. Hawthorne and Myron H. Wilt, Method of protecting material against the effects of light. U.S. Patent 2,905,570, Sept. 22, 1959.

[108] Dr. Bernard DeWitt of Columbia-Southern Corporation, Barberton, Ohio, analyzed on September 15, 1958, a British sovereign dated 1957 and a Newfoundland 2-dollar gold piece dated 1881 by using the smooth surface of a United States eagle of 1897 as a presumed standard of 90% gold and 10% copper. The X-ray analysis was made with a Phillips electronics X-ray spectrograph. The sovereign was shown to contain 91.3% gold and 8.7% copper, while the 2-dollar piece was shown to contain 91.7% gold and 8.3% copper. All specimens were made available for testing by Dr. Kenneth C. Eberly, of Akron, Ohio.

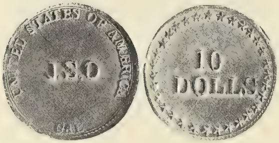
Fig. 54.—Ten-Dollar Gold Piece issued about 1849 by J. S. Orsmby & Co. in Sacramento, California.

Experiments were conducted in February 1960 concerning the application of the principle of X-ray diffraction as a nondestructive means for determining techniques used in the manufacture of coins and medals. Deceptive centrifugal casts may be readily ascertained and eliminated through this method. This was demonstrated in tests conducted in cooperation with the United States Secret Service and the Bureau of Standards. X-ray-back-reflection patterns of two United States 1-dollar gold pieces showed definite differences as can be seen from the juxtaposed photographs (fig. 140). The rings on the right are much narrower and less spotty than those on the left. They correspond to a struck, genuine piece on the right and a cast, counterfeit one on the left.[109] These experiments are based on the fact that the structure in this type cast metal is crystalline with extremely small crystallites due to the rapid cooling, while the processes in the manufacture of a struck piece induce distortions in the crystalline lattice. These differences of the structure of the metal result in different X-ray-back-reflection patterns.

In 1964 tests were conducted by the Division of Numismatics in cooperation with the Bureau of Standards to determine metallurgical details in connection with a platinum 50-cent piece dated 1814, a Russian 3-ruble piece, and two 5-dollar gold pieces issued in 1849 by the Massachusetts and California Gold Company. X-ray radiographic and diffraction techniques were used, and the experiments were continued in the spectrochemical analysis section of the Bureau of Standards.[110]

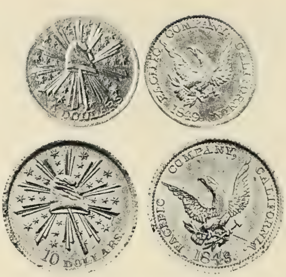
Fig. 55.—Five- and 10-Dollar Gold Pieces issued in 1849 by the Pacific Co. in San Francisco.

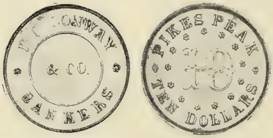
Fig. 56.—Ten-Dollar Gold Piece issued in 1861 by J. J. Conway and Co., Colorado.

Through the cooperation of the Naval Research Laboratory, it was possible to conduct comparative analyses of an ancient silver quarter shekel, struck during the first year (A.D. 66/67) of the Jewish war against the Romans, and of a silver shekel struck during the third year of the same war. The composition of the quarter shekel was found to be silver, with 2 to 3 percent copper and approximately 1 percent arsenic, according to X-ray fluorescence analysis. The shekel was made instead of practically pure silver, with only 1 percent copper and no other elements were present. The interpretation of the X-ray diffraction patterns allows some conclusions concerning the manufacture of the pieces, the quarter shekel was apparently worked cold, while the shekel planchet was subject to a long annealing process with very little, if any, cold work.[111] Such analyses are important for a better knowledge of ancient metallurgical and striking techniques, and they are being continued and expanded in our research laboratory.[112]

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[109] *USNM Report*, 1960, p. 49.

[110] *USNM Report*, 1964, p. 66.

[111] Ibid., pp. 66–67.

A systematic study was started in 1965 in cooperation with Mr. Maurice Salmon of the Smithsonian's Conservation Research Laboratory on the use of X-ray diffraction methods in the identification of various kinds of metal working. Thus it was possible to distinguish between nickel coins struck on planchets cut from rolled metal and coins struck on planchets produced through powder metallurgy.

In another instance two ancient Greek silver staters from Aegina, supposedly struck in the 6th century B.C., were examined and proved to be modern counterfeits. Subjected to X-ray-diffraction examination one coin showed a general uniformity of metal structure which led to the conclusion that it was cast. It was even possible to ascertain that the metal was chilled rapidly, being cast in a rather cold mold. The X-ray-diffraction patterns obtained from the second coin also indicated casting, but using an unevenly heated mold, which let one side of the coin cool more slowly than the other.

NEW HORIZONS

The future development of the national numismatic collections will continue along lines stemming from a fundamental recognition that our foremost duty is the search into the history of all forms of money, attempting to explain their origin, their evolution, their extrinsic appearance as well as their intrinsic qualities, their relations to economics, to social and cultural history, as well as to the history of art. Parallel with this is the search into the various aspects and developments of medallic art.

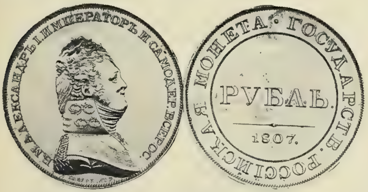

Fig. 57.—Pattern Silver Ruble of Tsar Alexander I of Russia, 1807.

We expect numismatics truly to broaden its scope more and more from a science which virtually restricted itself to metallic forms of currency or coins to a science concerned with the meaning and background of all forms of money, including primitive media of exchange, money substitutes, and documents of value.

A continuous reappraisal of the scope of numismatics will be essential. In order to be able to design and project plans for the future we should consider, for instance, that at this time, in 1966, the amount of metallic currency in circulation in the United States does not exceed 3½ billion dollars compared with 41 billion dollars in paper currency. These amounts are, in turn, dwarfed by the sums of money transferred in 1965 by the intermediary of checks. The Federal Reserve banks alone handled in that year 492 million Government checks for nearly 135 billion dollars. They also handled 4 billion 601 million other checks amounting to about 1 trillion 631 billion dollars. A multiple of this amount was transferred during the same period by other banks. This gives us a better perspective of the relatively limited role of hard currency in modern money transactions. The ever increasing use of checking accounts will lead to

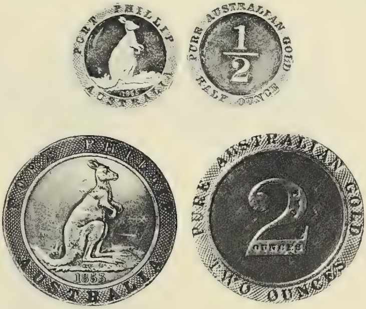

Fig. 58.—Half-Ounce and 2-Ounce Gold Tokens issued in 1853 by the "Kangaroo Office" in Victoria, Australia. Only two other specimens are known to exist.

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[112] V. Clain-Stefanelli, "An Application of Physics in Ancient Numismatics," *American Journal of Archaeology* (1966), vol. 70, no. 2, p. 185.

automation in banking, a necessary development in our modern credit-based economy. It is our mission to follow these developments and to preserve historical records typifying this evolution while it is in progress and while documentary material is relatively easy to obtain. What might be obvious to us today should be documented for the enlightenment of future generations.

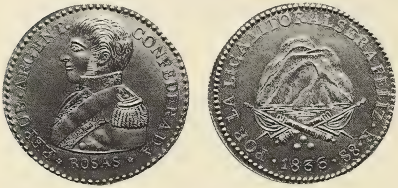


Fig. 59.—Onza Struck in 1836 at the La Rioja Mint in Argentina.

The continuous, it should be repeated, reappraisal of the scope of numismatics and the recognition of its ever developing duties should not be swayed by traditional concepts like the prevailing metallistic approach. Also, in our quest for history there is little if any place for the curious, the unusual as such. Emphasis must be placed instead on the historically significant aspects.

We expect that the growth rate of the collections will remain high, at least for some years, in contrast with the slow rate of growth of up to ten years ago. For comparative purposes we will mention the United States Mint collection which increased in 85 years—from 1838 to 1923—to around 18,000 specimens, or by a yearly average of 212 items. The United States National Museum collection showed an increase of 595 pieces each year during the period from 1881 to 1923. The national numismatic collections continued to grow from 1924 through 1956 at a yearly average of 531 items. In fact, during the latter period 17,000 items were added to the collections. In the past ten years instead the average yearly rate of growth increased to approximately 20,000 objects, the number of items added varying, of course, greatly from year to year.

It will be necessary to assemble and preserve the pertinent documentation that will enable us to study and better comprehend the development of money and of media of payment in their broad historic and economic context. True comprehension of these phenomena is possible only based on primary "numismatic" source material. Modern instances of regression to more "primitive" forms of monetary exchanges in times of need or economical stress provide case studies of enormous practical meaning. Thus it will be necessary to assemble documentary material to foster the study of monetary history in all its complexities. This difficult task might be aided

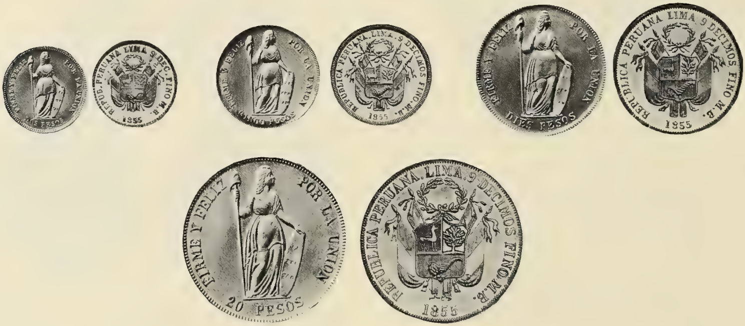


Fig. 60.—Set of Gold 2-, 5-, 10-, and 20-peso Peruvian coins struck at Philadelphia in 1855 for the Lima Mint as samples from American minting machinery purchased by Peru.

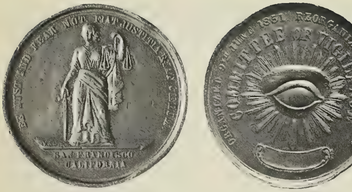


Fig. 61.—San Francisco Committee of Vigilance gold medal, 1856.

by the establishment of an American Institute of Numismatics.

Considering the ever broadening scope of the collections and the activities of the Division of Numismatics, it will be necessary to give recognition to the various areas of knowledge by establishing specialized sections. It also will be necessary to consider the introduction of new methods of electronic data processing and information retrieval.

The exhibits will be expanded within the near future to include displays illustrating a history of banking and other historical topics. To show particularly extensive and space consuming displays like paper currencies and documents of value as well as large series of coins, it will be necessary to expand the use of semi-automatic multiple tray exhibit cases. It appears desirable to develop special exhibit units featuring electronic selector devices in combination with storage units containing several display panels from which the visitor may select the one of particular interest to him. This should further increase visitor participation.

Research into the application of scientific methods of investigation, particularly physics, to numismatics will be intensified and developed even further. The application of optical interferometry in surface examination is an example of recent work done in this field in our Division. Perfecting methods of trace analysis and mass-spectrography may be used in metal dating; isotope ratios may give indications for the provenience of metals used in coinage. These examples are mentioned to show some of the new horizons in this area of research which we plan to pursue with the cooperation of the National Museum's Research Laboratory.

Last but not least, we believe that metal analysis should become a prerequisite and a routine requirement in descriptive works. Indeed, the correct composition of metallic objects must be established for cataloging purposes. It is not sufficient to give a description and to indicate with varying degrees of accuracy the relative position of die axes, or to record the individual weights; as we must proceed further in many series to comparative die studies, we also must consider of equal significance a better and exact knowledge of the composition of the matter studied.

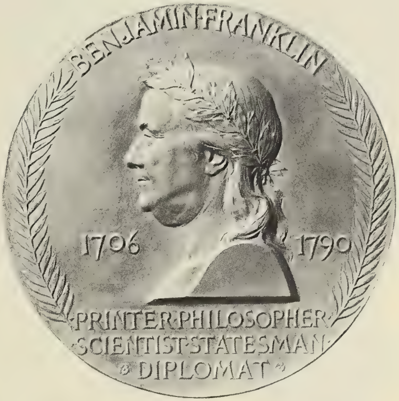


Fig. 62.—Bronze Casting from first study for Franklin medal made by A. Saint-Gaudens in 1906.

In summary, the advancement of the Division of Numismatics must be linked to the following basic quests: The development of authoritative collections, the arrangement of educationally meaningful exhibits, and the training of specialists, thus fulfilling the mission of a modern museum.

All these activities will be given true significance and a measure of permanent value only through an adequate and parallel publication program. New horizons dawned in this field with the series of publications released since 1965. Further activities along similar lines will help us expand all our programs and will help give the numismatic activities at the Smithsonian Institution the recognition they deserve.

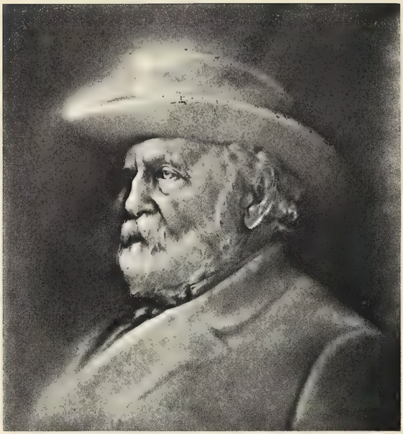


Fig. 63.—Plaquette of Collis P. Huntington by Victor D. Brenner.

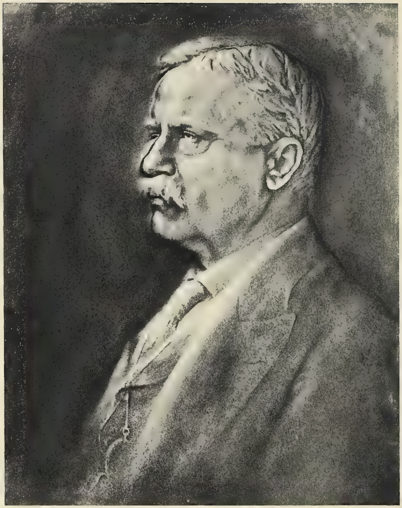
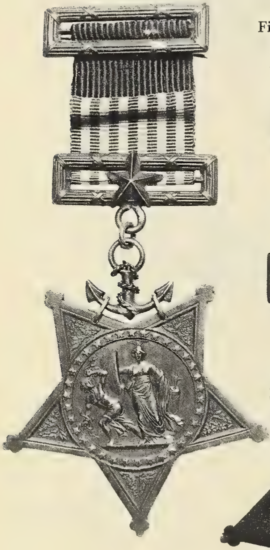


Fig. 64.—Cast-Bronze Plaquette of President Theodore Roosevelt by Victor D. Brenner, 1908.



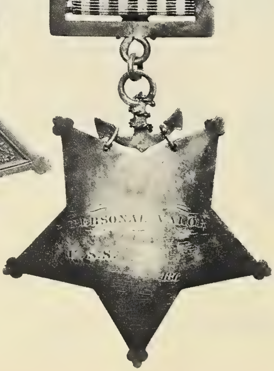
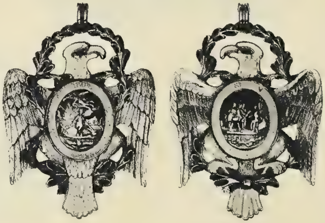


Fig. 65.—Unique Striking in silver of Navy Medal of Honor. Designed by Anthony C. Paquet.

Fig. 66.—Badge of the Society of the Cincinnati. This specimen can be traced back to 1862.



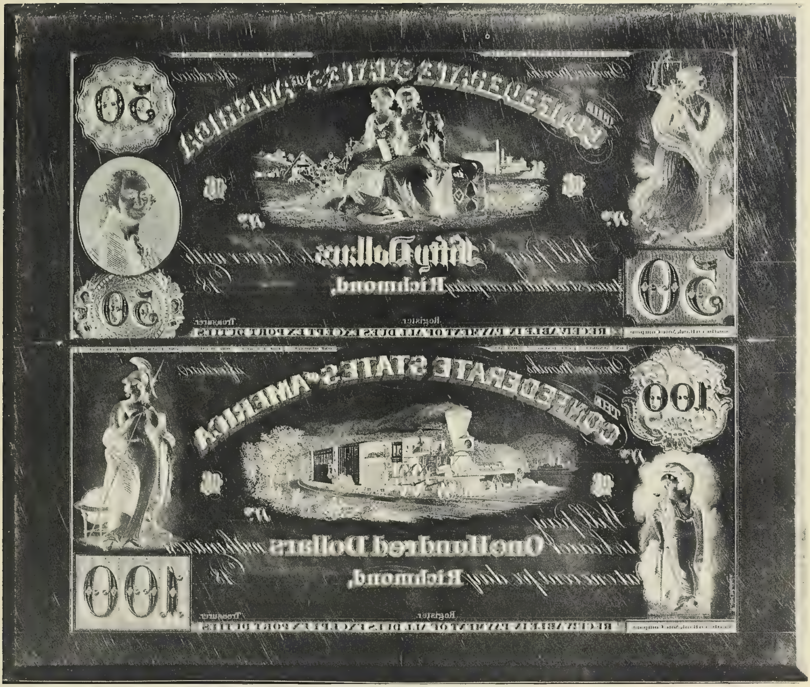
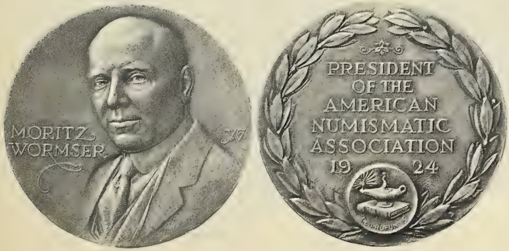

THE CONFEDERATE STATES of AMERICA
Fifty Dollars
Richmond.
50
THE CONFEDERATE STATES of AMERICA
One Hundred Dollars
Richmond.
100

Fig. 67.—Steel Plate for the printing of Confederate 50-dollar and 100-dollar notes, 1861. Three quarters actual size.

Fig. 69.—Stuart Mosher (1904–1956), acting curator of the Division of Numismatics, 1948–1956.

Fig. 68.—Moritz Wormser (1878–1940) medal.


MORITZ WORMSER
PRESIDENT OF THE AMERICAN NUMISMATIC ASSOCIATION
19 24

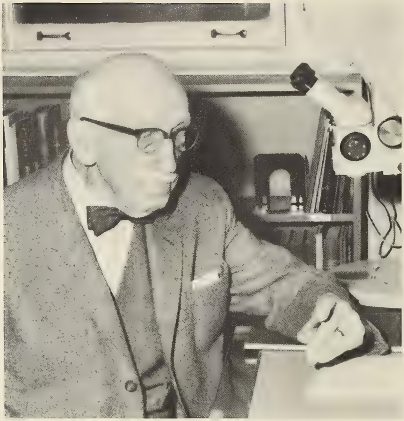


Fig. 70.—Paul A. Straub (1865–1958).

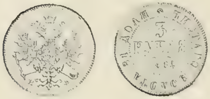


Fig. 73.—Gold 3-Ruble Piece of Tsar Alexander III of Russia, 1882. One of six pieces struck.

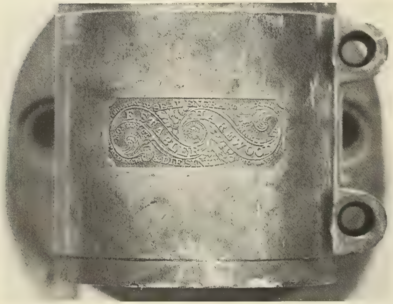


Fig. 77.—Guide for Press Shaft with name plate of E. Stabler, Harewood, Maryland.

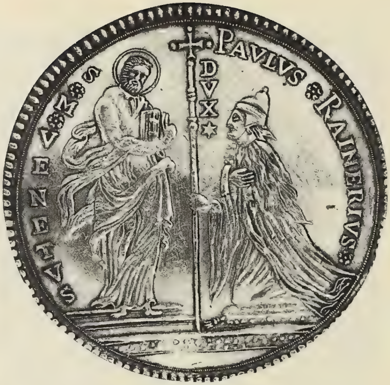
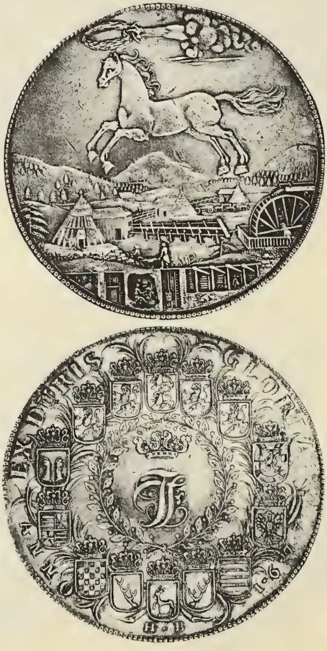


Fig. 71.—Gold 50-Zecchini Piece struck in the name of the Doge of Venice, Paolo Renier (1779–1789). Obverse.

Fig. 74.—Medallic Silver Piece struck in the name of Johann Friedrich of Brunswick, New Lüneburg, 1677.



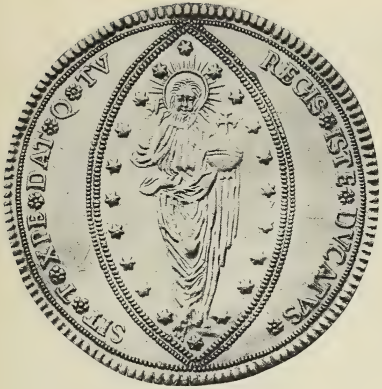
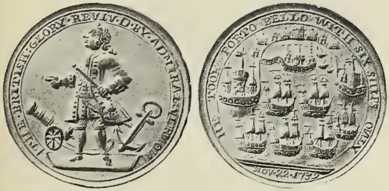

SIT T XPE DAT Q TV REGIS ISTE DVCATVS

Fig. 71.—Reverse.

Fig. 75.—Admiral Vernon Medal in brass, commemorating his capture of Porto Bello on November 22, 1739.


THE BRITISH GLORY REVIV'D BY ADMIRAL VERNON
HE TOOK PORTO BELLO WITH SIX SHIPS ONLY
NOV·22·1739

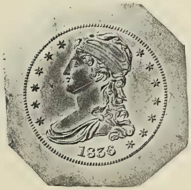


Fig. 78.—Die Trial in Lead of Christian Gobrecht's Liberty bust for half dollar, 1836.

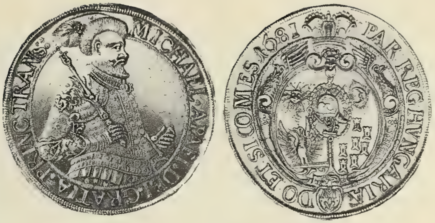

MICHAEL APAFI D G PRINC TRANS
1681 PAR REG HVNGARIÆ DO ET SIC COMES

Fig. 72.—Gold 25-Ducat Piece struck in the name of Michael Apafi of Transylvania, 1681.

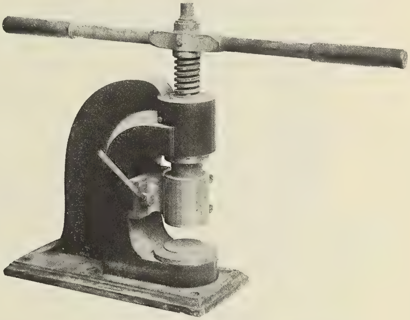
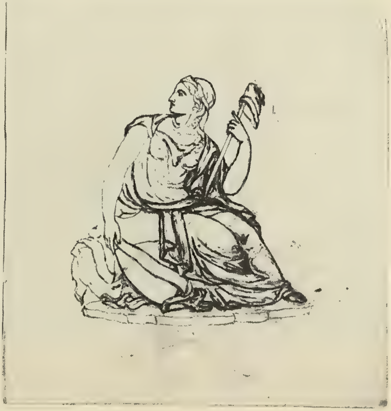


Fig. 76.—Edward Stabler's seal press.

Fig. 79.—Design for a Silver Dollar by C. Gobrecht after Thomas Sully's "Seated Liberty," drawn on mica to facilitate transfer to a brass study die.



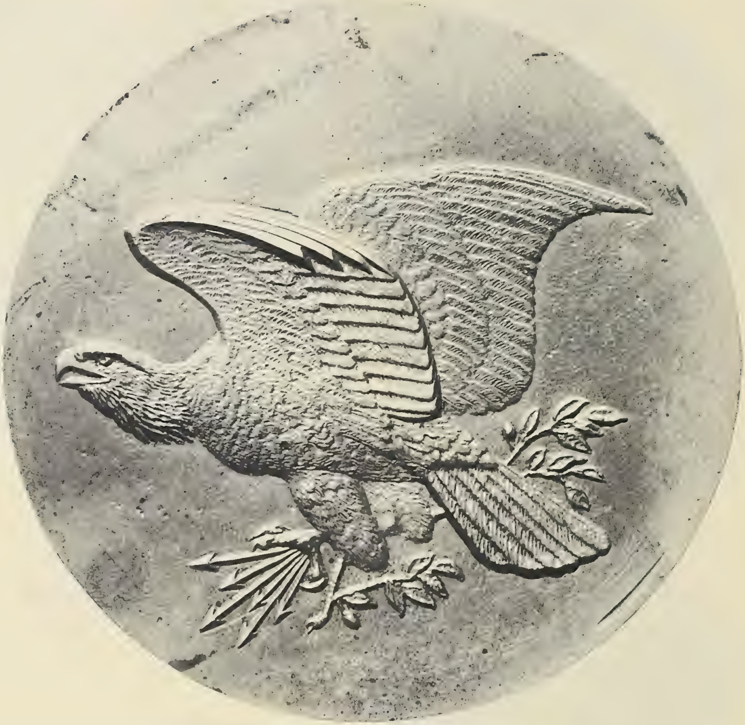


Fig. 80.—Cast Bronze Model by C. Gobrecht, after a design by Franklin Peale.

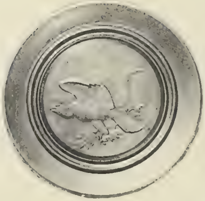


Fig. 81.—Mechanical Reduction from cast bronze model to actual size used on pattern half dollar, 1838.

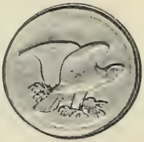


Fig. 82.—Bronze Trial from hub.

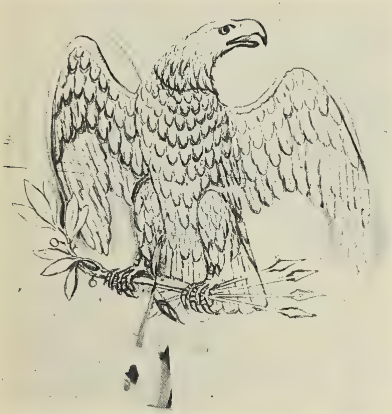
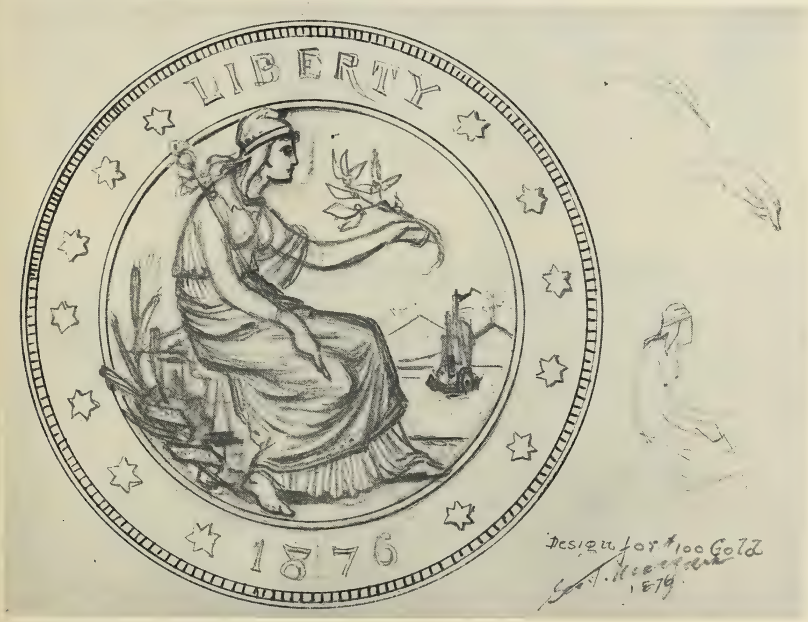


Fig. 83.—Ink Drawing by C. Gobrecht used, with slight variations, on the reverse of the pattern half dollar, 1838. It follows closely an original sketch by Franklin Peale.

Fig. 84.—Pencil Drawing by George T. Morgan for a proposed 100-dollar gold piece, 1876.


LIBERTY
1876
Design for $100 Gold
1876

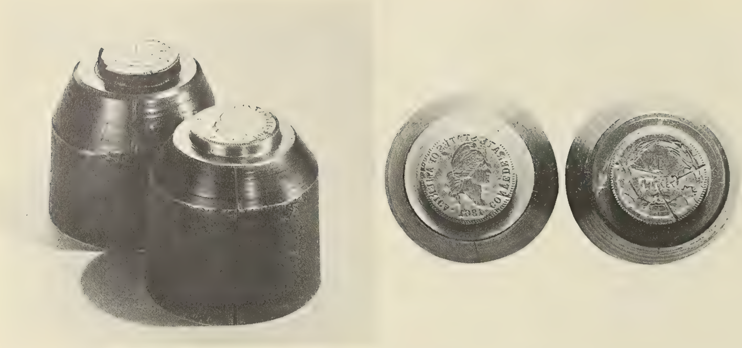


Fig. 85.—Original Dies made by Robert Lovett in Philadelphia for the striking of Confederate cent, 1861.

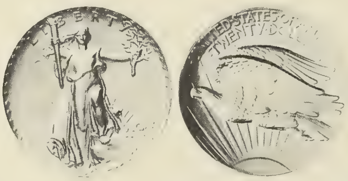
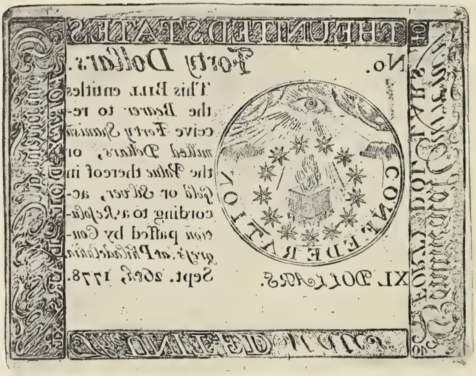
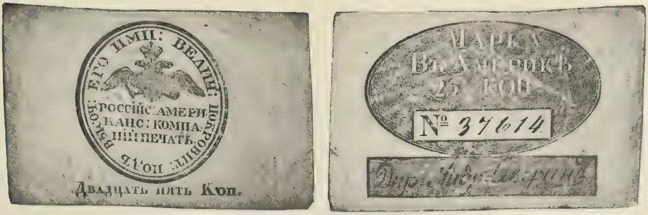

LIBERTY
UNITED STATES OF AMERICA
TWENTY DOLLARS

Fig. 86.—Experimental Double Eagle, 1907, originally owned by President Theodore Roosevelt.


THE UNITED STATES
Forty Dollars.
No.
CONFEDERATION
XL DOLLARS.

This Bill entitles the Bearer to receive Forty Spaniſh milled Dollars, or the Value thereof in Gold or Silver, according to a Reſolution paſſed by Congreſs at Philadelphia Sept. 26th, 1778.

Fig. 87.—Copper Plate of September 26, 1778, used by the British to counterfeit 40-dollar Continental currency notes.



ПОДЪ ВЫСОЧ: ЕГО ИМП: ВЕЛИЧ: ПОКРОВИТ:

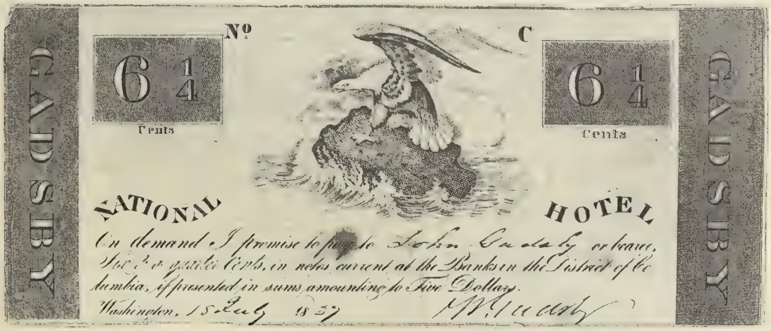
РОССІЙС: АМЕРИ: КАНС: КОМПА: НІИ ПЕЧАТЬ.

Двадцать пять Коп.

МАРКА ВЪ АМЕРИКѢ 25 КОП.

№ 37614

Fig. 88.—Alaskan 25-Kopeck sealskin note, issued by the Russian-American Company (ca. 1826).



GADSBY

№ C

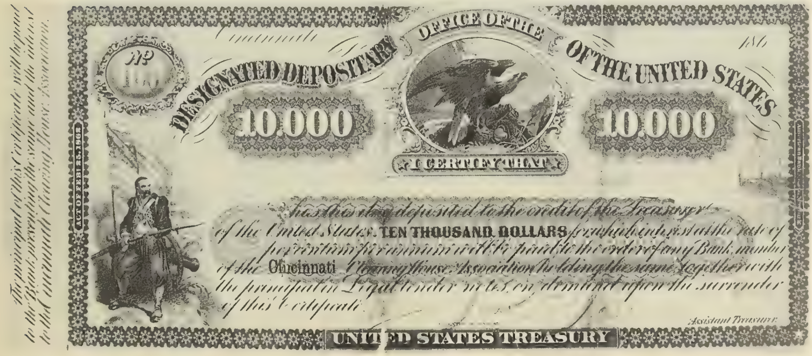
6 $\frac{1}{4}$ Cents

NATIONAL HOTEL

On demand I promise to pay to John Gadsby or bearer, Six & a quarter Cents, in notes current at the Banks in the District of Columbia, if presented in sums amounting to Five Dollars.

Washington, 18 July 1837

Fig. 89.—Scrip for 6¼ Cents (½ bit) issued in Washington, D.C., by Gadsby's National Hotel, July 18, 1837.



The principal of this certificate will be paid to the Bank presenting the same and the interest to the Cincinnati Clearing House Association.

Cincinnati 186

№ 100

OFFICE OF THE DESIGNATED DEPOSITARY OF THE UNITED STATES

10,000 10,000

I CERTIFY THAT

has this day deposited to the credit of the Treasurer of the United States TEN THOUSAND DOLLARS for which interest at the rate of per centum per annum will be paid to the order of any Bank, member of the Cincinnati Clearing House Association holding the same together with the principal in Legal tender notes, on demand upon the surrender of this Certificate.

Assistant Treasurer.

UNITED STATES TREASURY

Fig. 90.—Sub-Treasury Interest-Bearing certificate of deposit for 10,000 dollars payable through the Cincinnati Clearing House. Issued under the Act of February 25, 1862. Three quarters actual size.

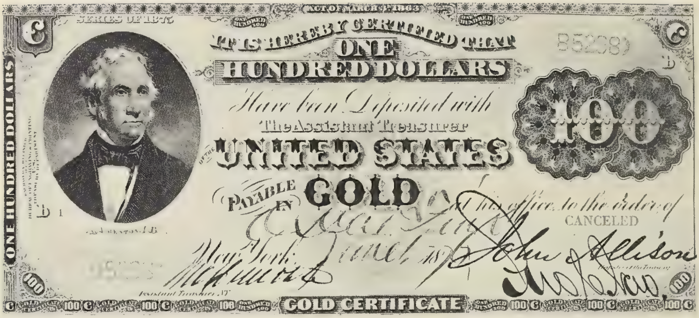

ACT OF MARCH 3, 1863
SERIES OF 1875
IT IS HEREBY CERTIFIED THAT
ONE
HUNDRED DOLLARS
Have been Deposited with
The Assistant Treasurer
OF THE UNITED STATES
PAYABLE IN GOLD
at his office, to the order of
CANCELED
New York, June 1, 187
B52089
100
ONE HUNDRED DOLLARS
Assistant Treasurer N.Y.
Register of the Treasury
GOLD CERTIFICATE

Fig. 91.—United States 100-dollar gold certificate, 1877. About ¾ actual size

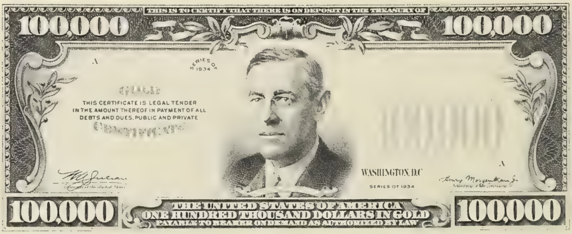

THIS IS TO CERTIFY THAT THERE IS ON DEPOSIT IN THE TREASURY OF
100,000
100,000
A
SERIES OF 1934
GOLD
THIS CERTIFICATE IS LEGAL TENDER IN THE AMOUNT THEREOF IN PAYMENT OF ALL DEBTS AND DUES, PUBLIC AND PRIVATE
CERTIFICATE
WASHINGTON, D.C.
SERIES OF 1934
A
Henry Morgenthau Jr.
Secretary of the Treasury
Treasurer of the United States
100,000
THE UNITED STATES OF AMERICA
ONE HUNDRED THOUSAND DOLLARS IN GOLD
PAYABLE TO BEARER ON DEMAND AS AUTHORIZED BY LAW
100,000

Fig. 92.—Specimen printing of United States 100,000-dollar gold certificate, 1934 series. About ¾ actual size.

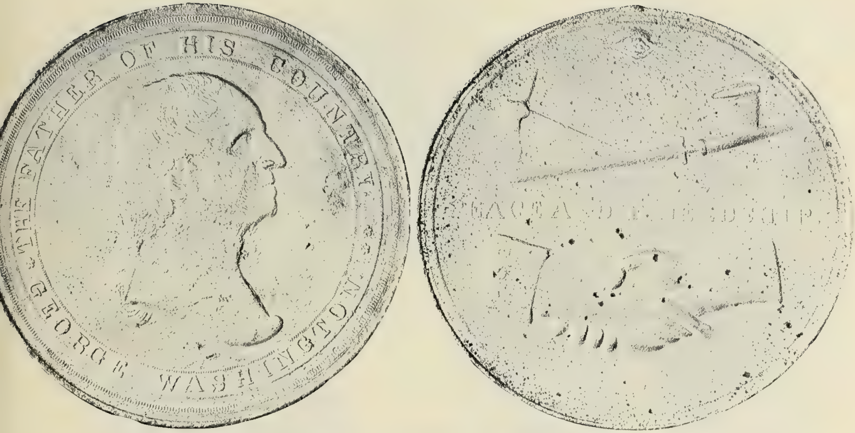
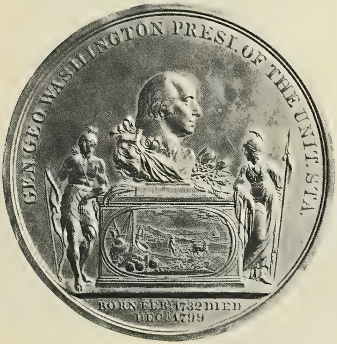

THE FATHER OF HIS COUNTRY
GEORGE WASHINGTON
PEACE AND FRIENDSHIP

Fig. 93.—Pewter Medal distributed to Indians by Missouri Fur Trading Co., 1843.

Fig. 94.—Silver Shell of George Washington medal, attributed to Conrad H. Küchler and supposedly prepared for Peace medal.


GEN. GEO. WASHINGTON PRESI. OF THE UNIT. STA.
BORN FEB. 1732 DIED
DEC. 1799

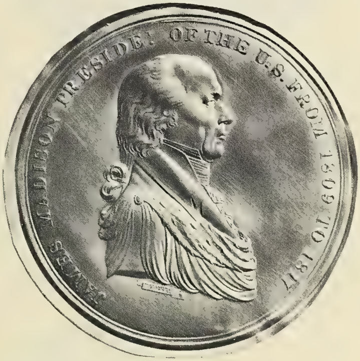

JAMES MADISON PRESIDE. OF THE U.S. FROM 1809 TO 1817

Fig. 95.—White Metal Shell of James Madison medal by Moritz Fürst.

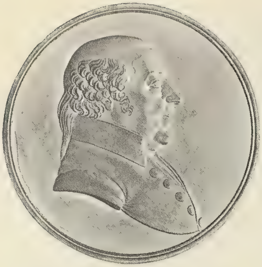


Fig. 96.—Trial Impression in white metal of John Adams Indian Peace medal.

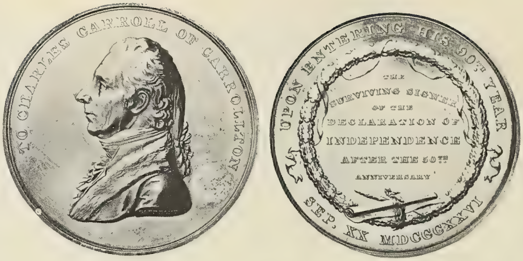

TO CHARLES CARROLL OF CARROLLTON
UPON ENTERING HIS 90TH YEAR
THE SURVIVING SIGNER OF THE DECLARATION OF INDEPENDENCE AFTER THE 50TH ANNIVERSARY
SEP. XX MDCCCXXVI

Fig. 97.—Silver Medal, 1826, by C. Gobrecht, commemorating Charles Carroll of Carrollton, a signer of the Declaration of Independence.

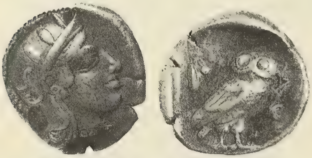


Fig. 98.—Silver drachma struck in Athens, 5th century B.C. Twice actual size.

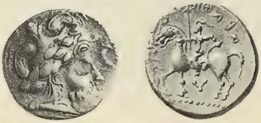


Fig. 99.—Silver Stater struck by Celtic tribe in the Danube region, ca. 2nd century B.C.

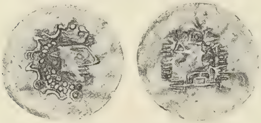


Fig. 100.—Gold ½ Stater struck by Celtic tribe 1st century B.C. or later in imitation of posthumous stater of Lysimachus of Thrace.

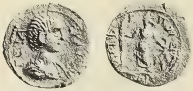


Fig. 101.—Bronze Coin struck at Amphipolis, Macedon, in the name of Geta as Caesar (A.D. 198–209).

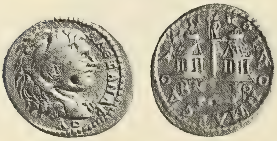


Fig. 102.—Bronze Coin struck in Macedon during the reign of Emperor Gordian III (A.D. 238–244).

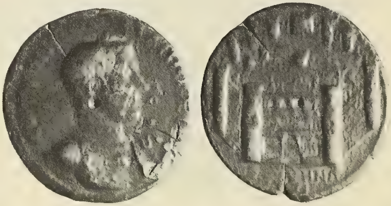


Fig. 103.—Bronze Medallion struck in the name of Emperor Philip I (A.D. 244–249), showing view of the city of Bizya, Thrace.

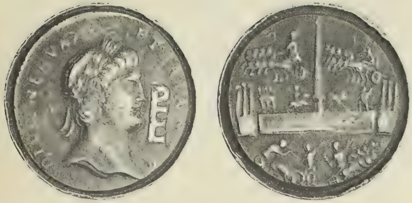


Fig. 104.—Bronze Contorniate struck about A.D. 356–399 showing head of Emperor Trajan and view of circus maximus; monogram in silver inlay.

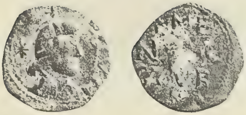


Fig. 105.—Bronze Follaro struck at Salerno, Italy, during the 10th century.

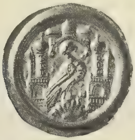


Fig. 106.—German Bracteate struck by Count Burkhard II of Falkenstein (1147–1174).

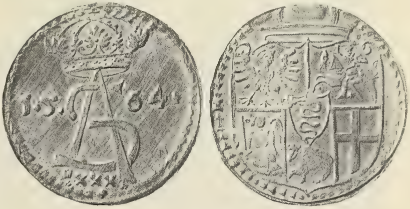


Fig. 107.—Necessity Silver Taler struck in the name of Sigismund II Augustus of Poland in 1564, during the war with Livonia.

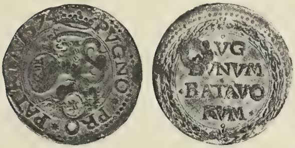


Fig. 108.—Necessity Quarter Gulden stamped on cardboard during the Spanish siege of Leyden in 1574.

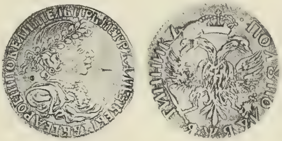


Fig. 109.—Silver Half Poltina of Peter the Great, 1701.

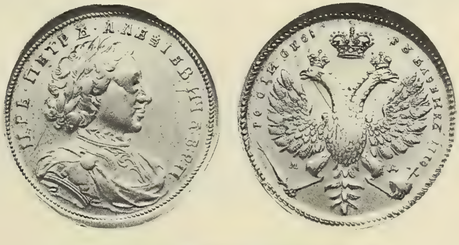


Fig. 110.—Silver Ruble of Peter the Great, 1710.

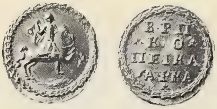


Fig. 111.—Copper Trial Kopeck of Peter the Great, 1721.

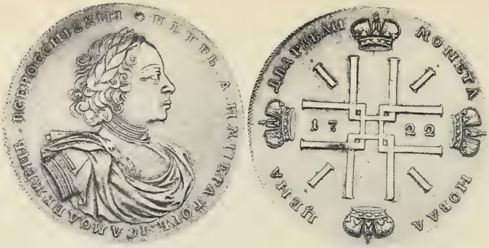


Fig. 112.—Silver Double Ruble of Peter the Great, 1722.

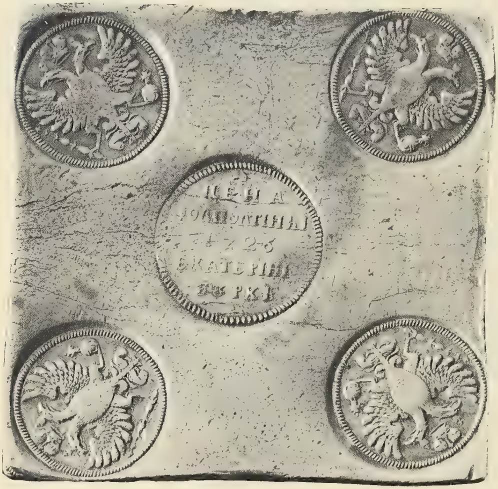


Fig. 114.—Square Copper Half Poltina of Catherine I, 1726.

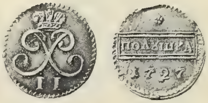


Fig. 115.—Copper Polushka of Peter II, 1727.

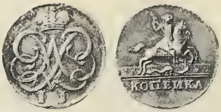


Fig. 116.—Trial Kopeck in copper of Peter II (1727–1730).

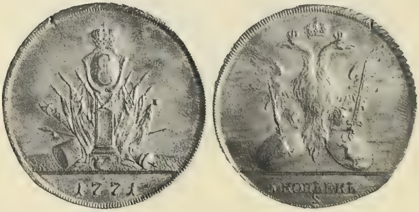


Fig. 118.—Copper Pattern for 5-kopeck piece struck in 1771 by Catherine II, during the occupation of Moldavia and Wallachia.

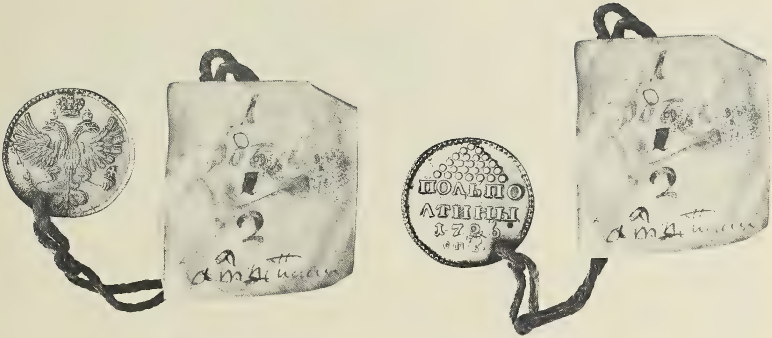


Fig. 113.—Pattern Half Poltina in silver, 1726; with mint tag.

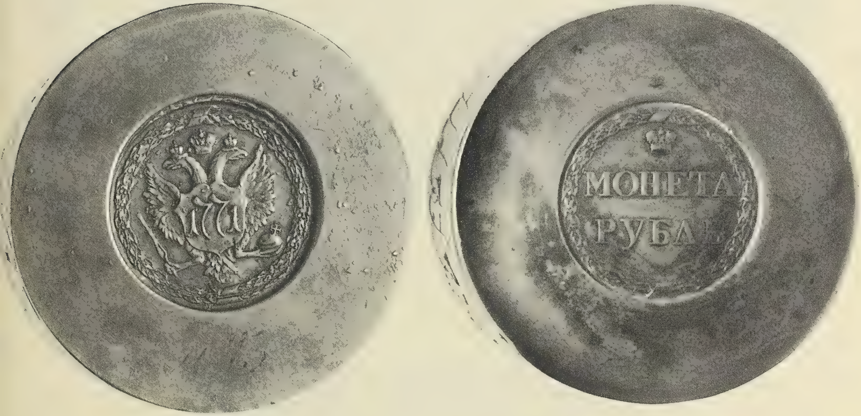


Fig. 117.—Copper Pattern Ruble of Catherine II, 1771.

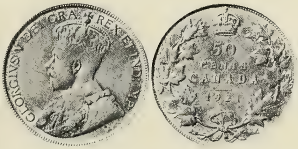
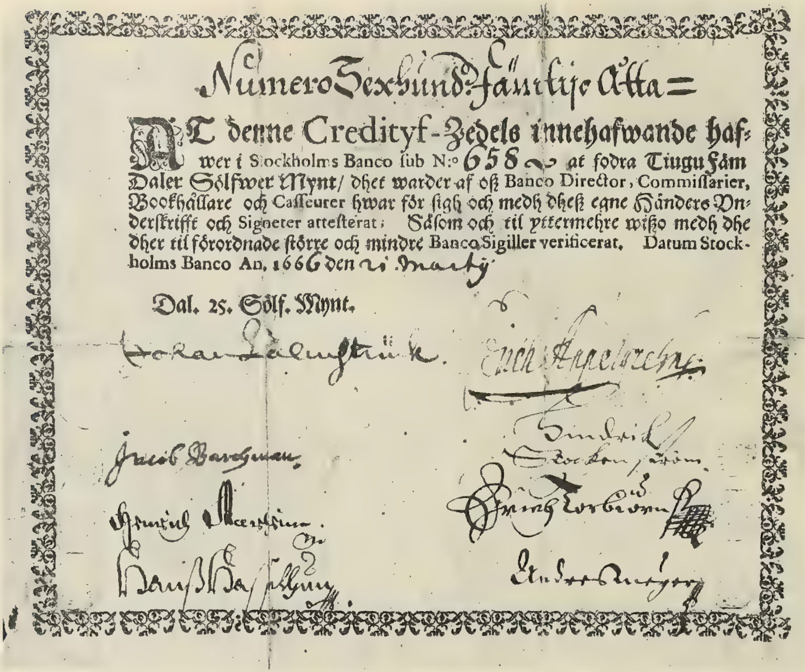


Fig. 119.—Fifty-cent Piece of Canada, 1921.



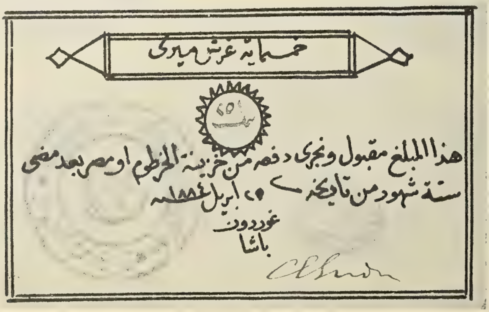
Numero Sexhundr: Fämtijo Atta =

AT denne Credityf-Zedels innehafwande hafwer i Stockholms Banco ſub N:o 658 at fodra Tiugu Fäm Daler Sölfwer Mynt/ dhet warder af oß Banco Director, Commiſſarier, Bookhållare och Caſſeurer hwar för ſigh och medh dheß egne Händers Underſkrifft och Signeter atteſterat; Såſom och til yttermehre wißo medh dhe dher til förordnade ſtörre och mindre Banco Sigiller verificerat. Datum Stockholms Banco An. 1666 den 21. Martij

Dal. 25. Sölf. Mynt.

Fig. 120.—Swedish Certificate of credit for 25 dalers in silver, 1666, issued by the Stockholm Bank. One of the earliest bank notes issued in the Western world. Slightly reduced.

Fig. 122.—A 500-Piastre Note issued by General Gordon in Khartoum, Sudan, 1884.

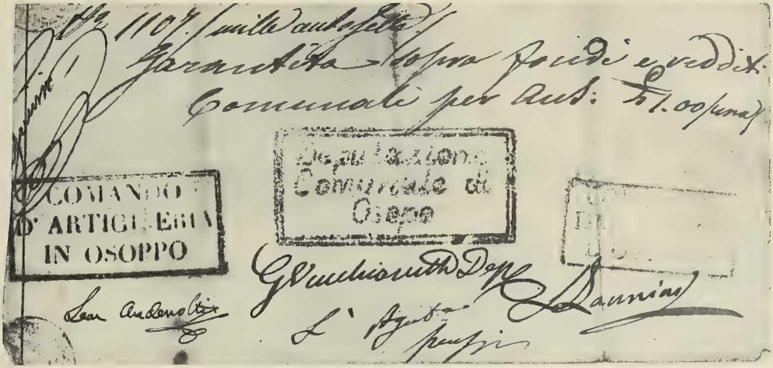


خمسماية غرش ميري

هذا المبلغ مقبول ويجري دفعه من خزينة الخرطوم او مصر بعد مضي ستة شهور من تاريخه ٢٥ ابريل ١٨٨٤ سنه

غوردون باشا

C.E. Gordon



N° 1107 (mille cento sette)

Garantita sopra fondi e reddit.

Comunali per Aus: £ 1.00 (una)

COMANDO
D'ARTIGLIERIA
IN OSOPPO

Deputazione
Comunale di
Osoppo

L' Agente

Fig. 121.—ONE-LIRE NOTE issued during the Austrian siege of Osoppo (Lombardo-Venetia) in 1848.

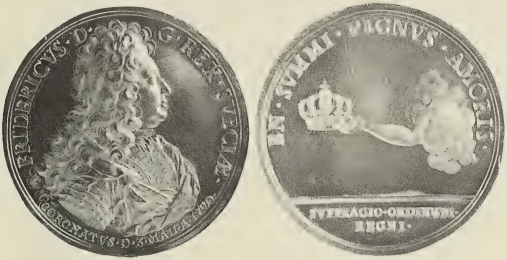

FRIDERICVS · D · G · REX SVECIAE ·
CORONATVS · D · 3 · MAII · 1720
IN · SVMMI · PIGNVS · AMORIS ·
SVFFRAGIO · ORDINVM · REGNI ·

Fig. 123.—GOLD MEDAL commemorating coronation of Frederick I of Sweden, May 3, 1720. Engraved by J. K. Hedlinger.

Fig. 124.—SILVER MEDAL commemorating the capture of Noteborg, 1702, by Peter the Great of Russia.

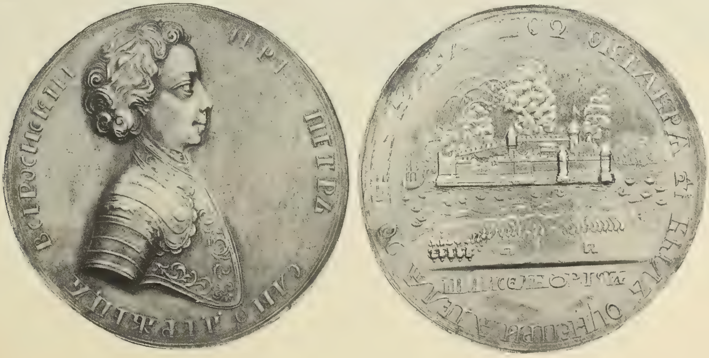
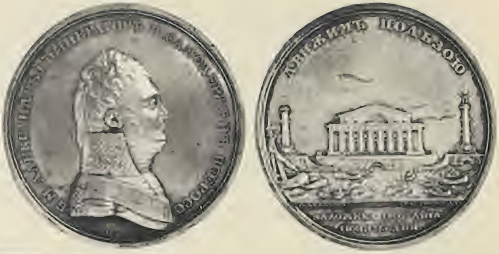


Fig. 125.—Silver Medal of Alexander I of Russia, commemorating the construction of the Stock Exchange in St. Petersburg, 1805. Engraved by F. Leberecht.



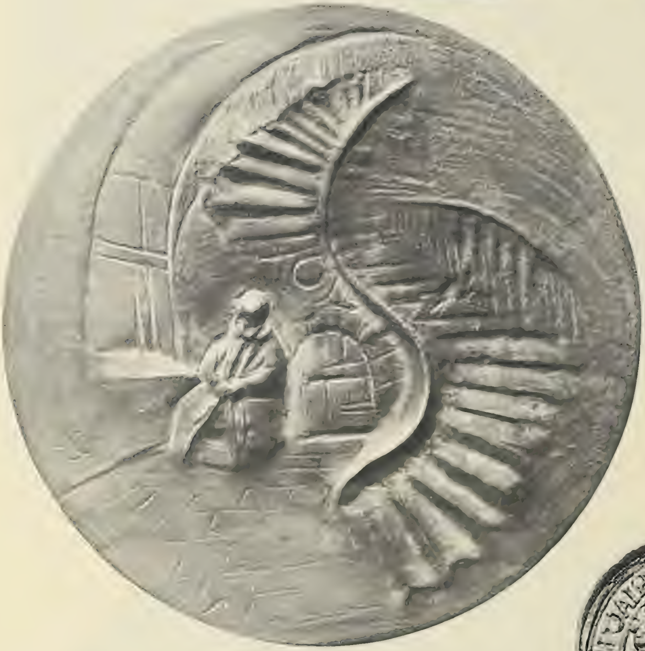


Fig. 126.—"The Philosopher," reverse of Rembrandt medal in cast bronze by French medallist Raymond Joly.

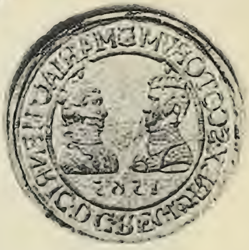


Fig. 127.—Obverse Die used for marriage medal of Mary, Queen of Scotland and Lord Darnley, 1565.

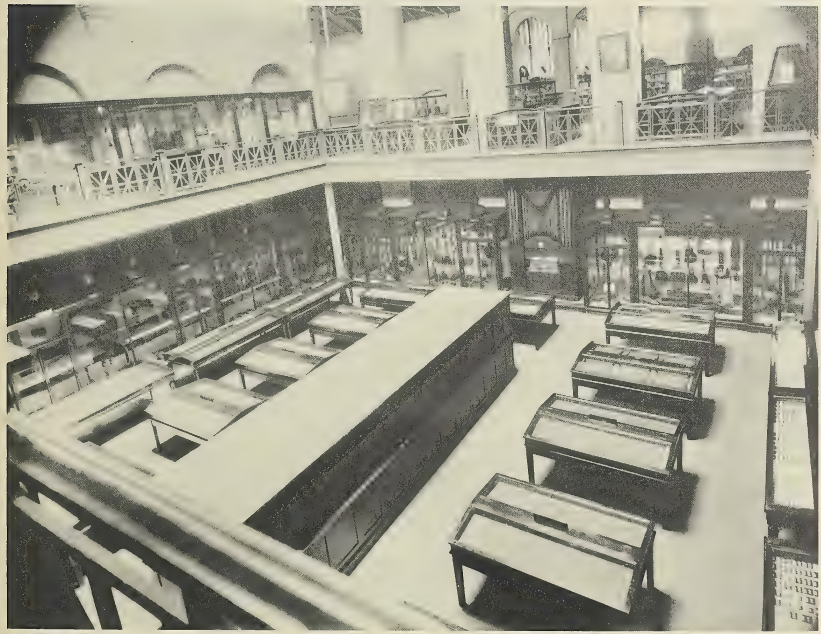


Fig. 128.—General View of the northwest court in the Arts and Industries Building, about 1915.

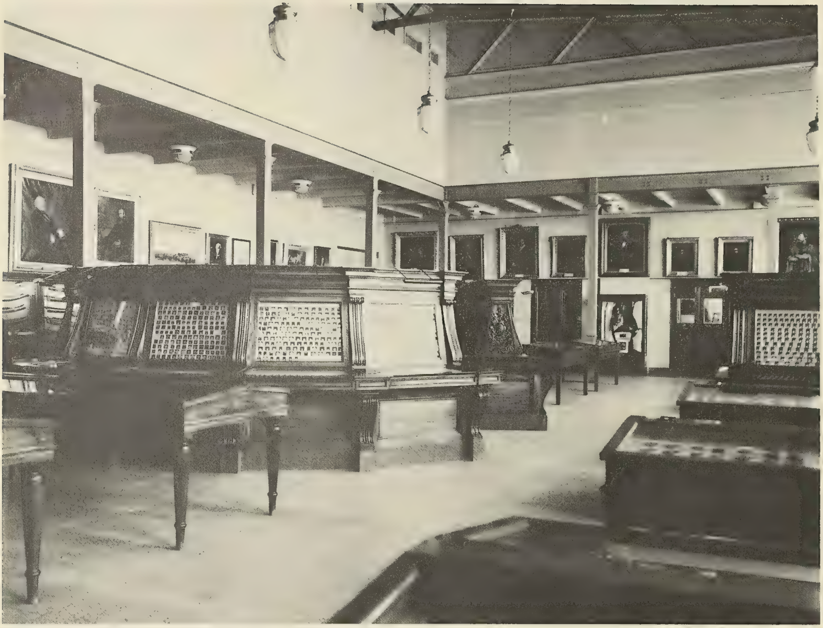


Fig. 129.—View of Numismatic Exhibits in the west-north hall of the Arts and Industries Building, 1924.

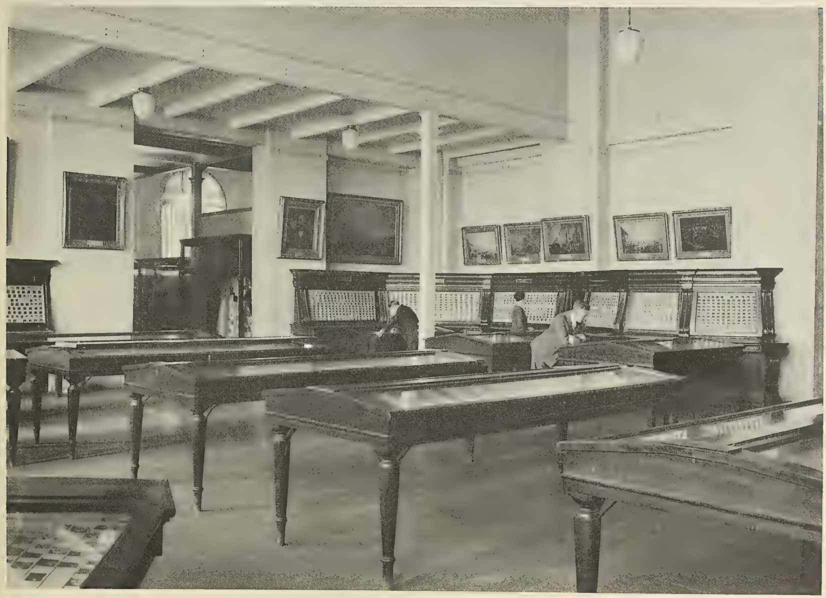


Fig. 130.—View of Numismatic Exhibits in the northwest range of the Arts and Industries Building, 1932.

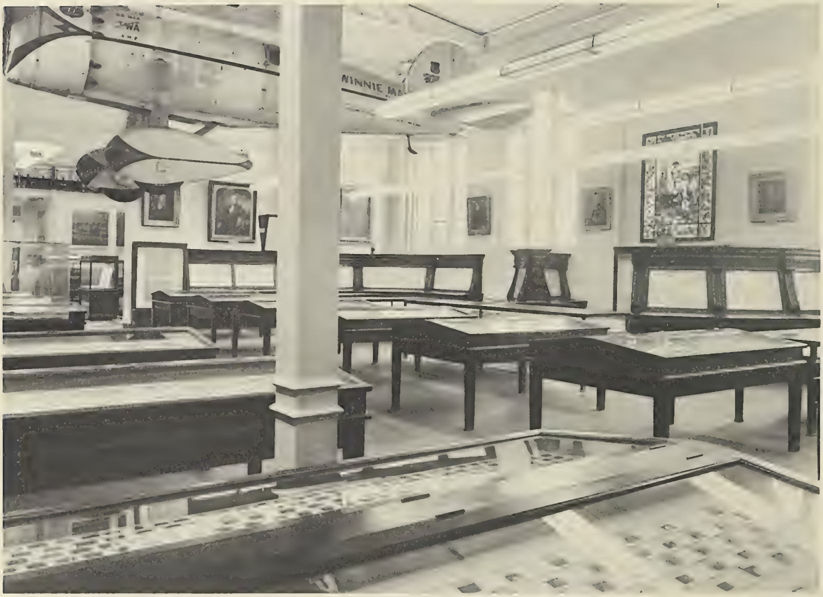


Fig. 131.—Numismatic Exhibits in the Arts and Industries Building, 1957.

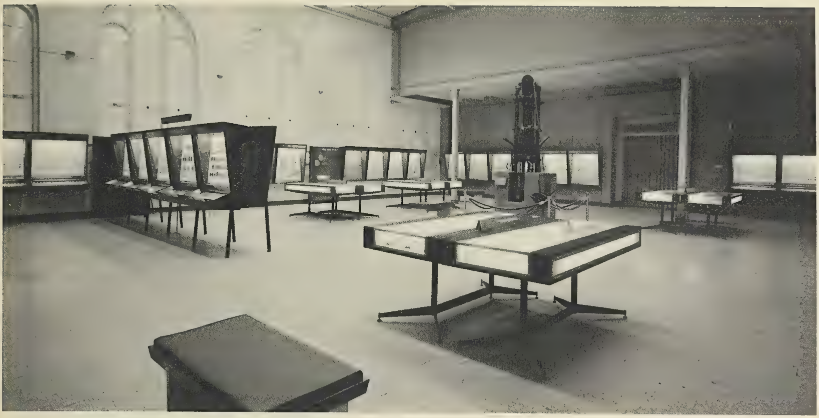


Fig. 132.—Modernized Numismatic Exhibits, Arts and Industries Building, 1961.

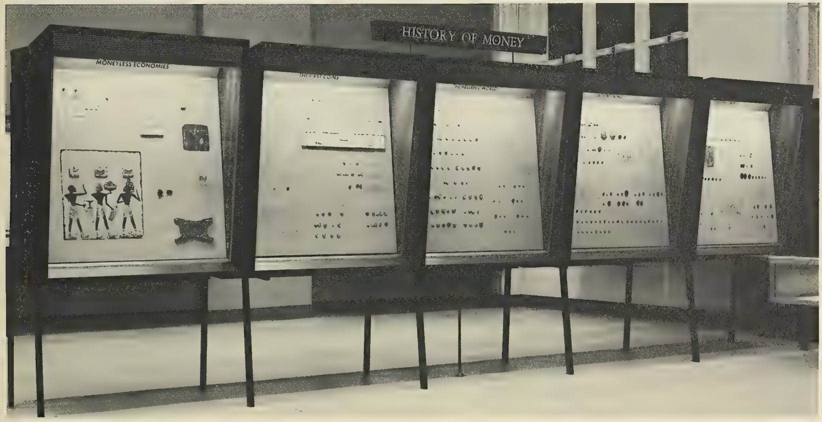

HISTORY OF MONEY
MONEYLESS ECONOMIES

Fig. 133.—First Section of history of money exhibit.

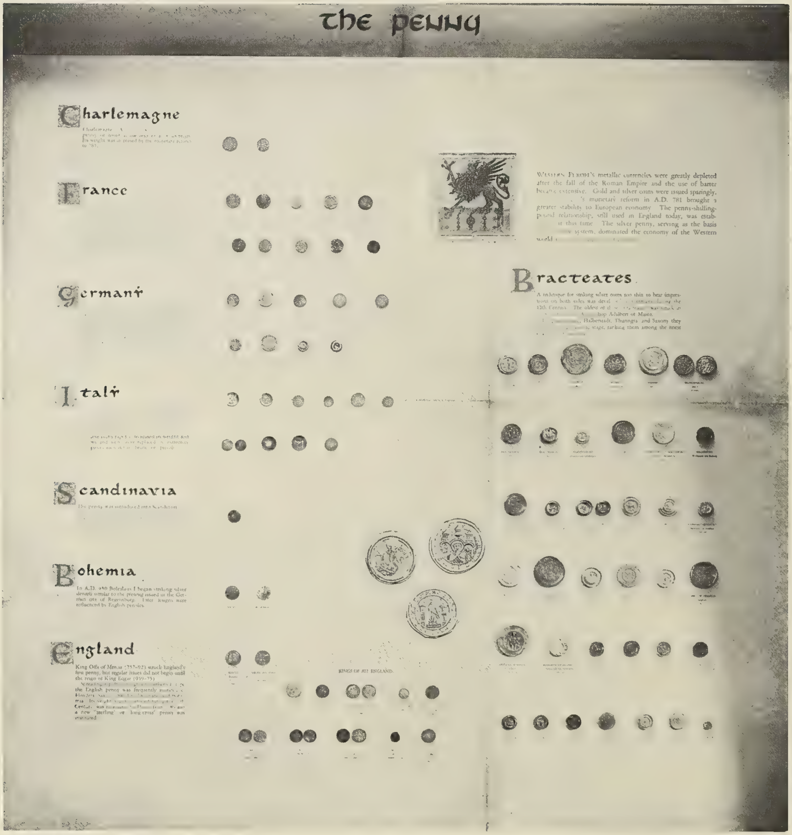
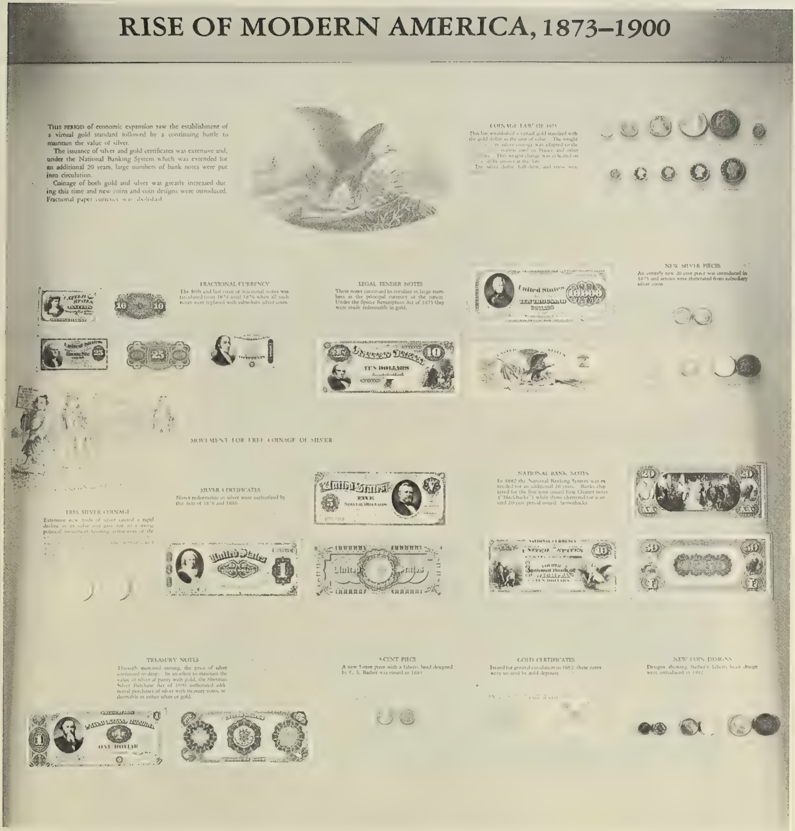

the penny
Charlemagne
France
Germany
Italy
Scandinavia
Bohemia
England
KINGS OF ALL ENGLAND
Bracteates

Fig. 134.—Exhibit Illustrating the penny as the dominant coin of the Western world in the Middle Ages.



RISE OF MODERN AMERICA, 1873–1900

THIS PERIOD of economic expansion saw the establishment of a virtual gold standard followed by a continuing battle to maintain the value of silver.

The issuance of silver and gold certificates was extensive and, under the National Banking System which was extended for an additional 20 years, large numbers of bank notes were put into circulation.

Coinage of both gold and silver was greatly increased during this time and new coins and coin designs were introduced. Fractional paper currency was abolished.

COINAGE LAW OF 1873

This law established a virtual gold standard with the gold dollar as the unit of value. The weight [illegible] silver coinage was adapted to the [illegible] system used in France and other [illegible]. This weight change was indicated on [illegible] by arrows at the date. The silver dollar, half-dime, and three-cent [illegible]

FRACTIONAL CURRENCY

The fifth and last issue of fractional notes was circulated from 1874 until 1876 when all such notes were replaced with subsidiary silver coins.

LEGAL TENDER NOTES

These notes continued to circulate in large numbers as the principal currency of the nation. Under the Specie Resumption Act of 1875 they were made redeemable in gold.

NEW SILVER PIECES

An entirely new 20 cent piece was introduced in 1875 and arrows were eliminated from subsidiary silver coins.

MOVEMENT FOR FREE COINAGE OF SILVER

FREE SILVER COINAGE

Extensive new finds of silver caused a rapid decline in its value and gave rise to a strong political movement favoring restoration of the [illegible]

SILVER CERTIFICATES

Notes redeemable in silver were authorized by the Acts of 1878 and 1886.

NATIONAL BANK NOTES

In 1882 the National Banking System was extended for an additional 20 years. Banks chartered for the first time issued First Charter notes ("blackbacks") while those chartered for a second 20-year period issued "brownbacks."

TREASURY NOTES

Through increased mining, the price of silver continued to drop. In an effort to maintain the value of silver at parity with gold, the Sherman Silver Purchase Act of 1890 authorized additional purchases of silver with treasury notes, redeemable in either silver or gold.

5-CENT PIECE

A new 5-cent piece with a liberty head designed by C. E. Barber was issued in 1883.

GOLD CERTIFICATES

Issued for general circulation in 1882, these notes were secured by gold deposits.

NEW COIN DESIGNS

Designs showing Barber's liberty head design were introduced in 1892.

Fig. 135.—PANEL ILLUSTRATING the period of economic expansion in the United States during the late 19th century.

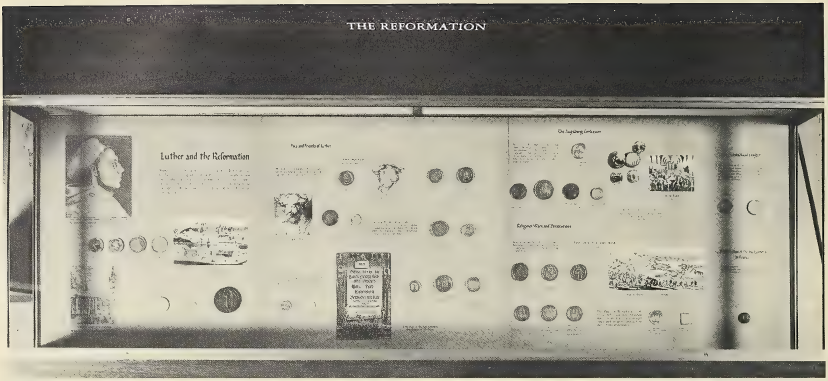

THE REFORMATION
Luther and the Reformation

Fig. 136.—Table Case Arrangement depicting the history of the Reformation in coins and medals.

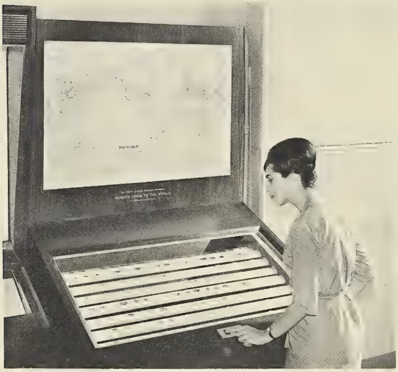
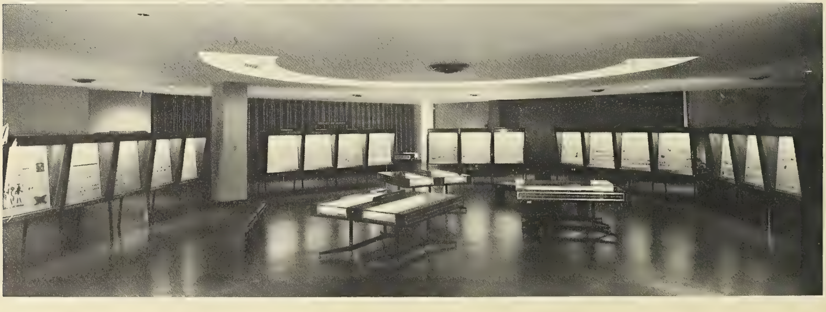

THE WORLD
MODERN COINS OF THE WORLD

Fig. 138.—Semi-automatic Display Case housing the Moritz Wormser collection of 20th-century coins of the world.

Fig. 139.—Hall of Monetary History and Medallic Art in the Museum of History and Technology, 1965.



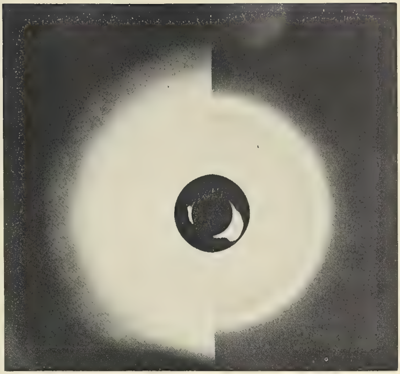


Fig. 140.—X-Ray-Back-Reflection patterns of two gold coins, serving to distinguish between a genuine struck coin (left) and a counterfeit cast piece (right).

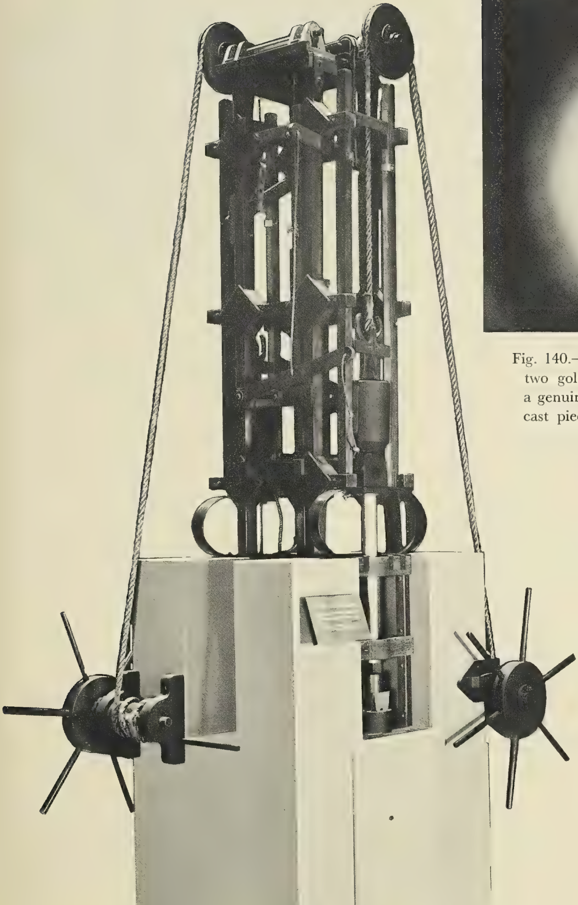


Fig. 137.—Reconstruction of Leonardo da Vinci's coin stamper.

APPENDIX I

Smithson's Gold Sovereigns

From the very beginning of minting operations in the United States, choice specimens were sought for the Mint Collection. William E. Du Bois in his *Pledges of History. A Brief Account of the Collection of Coins Belonging to the Mint of the United States, More Particularly of the Antique Specimens* (Philadelphia, 1846) states that from the early days of the Mint, Adam Eckfeldt (fig. 12) used to select "and to retain some of the finest foreign specimens, as they appeared in deposit for recoinage." This had become an established procedure by June 1838 when the Mint cabinet was officially opened, just a few months before the huge Smithson gold deposit was received. The eagerness of the Mint assayers, William E. Du Bois (fig. 13) and Jacob R. Eckfeldt, to complete the Mint collections is well recorded. In his *Pledges of History* in 1846 and, again, in a second edition in 1851, Du Bois mentions that after the collection took a permanent form in June 1838, it "has gone on in a continual augmentation . . . specimens of new coinage, domestic or foreign, must be added as they appear.

"A great majority of the coins—almost all of those not over three hundred years old—have been culled from deposits, and consequently have cost us no more than their bullion value. They are moreover, the choicest of their kind. . . ."

Data concerning coins which might have been represented in the Mint collection in that early period of its existence may be excerpted, with caution and some qualifications, from Eckfeldt and Du Bois' *A Manual of Gold and Silver Coins of All Nations Struck Within the Past Century* (Philadelphia, 1842). A medal-ruling machine invented by Christian Gobrecht and perfected by Joseph Saxton was used in making the illustrations in this *Manual*. The method required the preparation of galvanic copies from actual coins, and we must assume that they used only examples of coins easily accessible to them, and drew largely, therefore, on the Mint collection.

Among the English coins illustrated on plate VI of the *Manual* and described on pages 192 and 193 are found sovereigns of George III dated 1817 (illus. 5), William IV dated 1831 (illus. 7), and one dated 1838 of Queen Victoria (illus. 14). These, of course, may not be considered as a listing of *all* sovereigns represented at the time on the trays of the Mint collection, but rather as a selection considered to be within the scope of the *Manual*.

Some years later, a catalogue listing all coins in the Mint cabinet was prepared under the direction of James Ross Snowden, director of the Mint. Entitled *A Description of Ancient and Modern Coins, in the Cabinet Collection at the Mint of the United States*, it was published in 1860 in Philadelphia. English coins from the period of the Smithson bequest may be found listed on pages 193–199. From this listing we learn that the collection contained sovereigns dated 1817,[113] 1818,[114] 1823, 1826,[115] 1831, and 1838.[116] Sovereigns were first issued in 1817 in the name of George III and continued to be struck in his name up to the end of his reign in 1820. Under George IV (1820–1830) there were two issues showing distinctly different designs. William IV (1830–1837) sovereigns were struck with dates from 1831 to 1837, while 1838 is the first year of sovereigns issued in the name of Queen Victoria (1837–1901). One might assume that sovereigns similar to any of these, bearing various dates from 1817–1838, would have been included in the Smithson deposit of 104,960 pieces; this, however, does not seem to have been the case.

The 1826 sovereign and the 1831 sovereign of William IV are not of a regular issue coined for circulation, but rather specimen strikings or proofs. Both pieces are preserved in the national numismatic collections at the Smithsonian. Obviously, these two pieces could not have been selected from deposits, but came directly from the London Mint and were among the "sample coins" which Franklin Peale was "obliged to purchase" and which he sent in 1833 to Samuel Moore, then director of the United States Mint, together with a few others presented to him by Mr. Morrison, the deputy master of the Royal Mint.[117]

There are, however, two sovereigns struck in the name of Queen Victoria, *both dated 1838*, and these are listed in Snowden's catalogue on pages 197ff. under numbers 183 and 184. One of the sovereigns is illustrated on plate XIX, 1.[118] These listings of the two coins of identical dates are confirmed in later editions of the Mint catalogue prepared by Thomas Louis Comparette,[119] and, in fact, both of the 1838 sovereigns have been in the Smithsonian since the transfer of the United States Mint collection to Washington on May 29, 1923.

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[113] SNOWDEN, *Description*, p. 193, no. 124. A die break on the reverse side identifies this piece with the one illustrated on plate VI, 5 in the "*Manual*" and with the one now in the national collections.

[114] Ibid., no. 125.

[115] Ibid., p. 195, nos. 149–150. The 1823 sovereign is not listed in the second (1913) and third (1914) editions of the U.S. Mint catalogue, neither can it be located in the collection.

[116] Ibid., p. 197, no. 169.

[117] Letter from Franklin Peale to S. Moore, November 20, 1833, National Archives, Records of the United States Mint at Philadelphia, Franklin Peale Correspondence, No. 1.

Assuming the "continual augmentation" of the Mint collection, and with 104,960 gold sovereigns in the Smithson deposit of 1838 from which to choose, it seems likely that special circumstances led to the presence in the Mint collection of two identical coins of 1838. This strongly suggests that the Smithson deposit made by agent Rush did not contain sovereigns from dates other than 1838.[120] Had all dates issued for the 1817–1838 period been represented it might be expected that at least some of the later dates would have been in the Mint collection, but they are not.

Perhaps the simplest and most obvious explanation for assuming that the two 1838 sovereigns in the Smithsonian Mint collection were chosen from the Smithson deposit is that Richard Rush—a lawyer, a former Attorney General and Secretary of State, and the appointed agent of the United States in acquiring the Smithson bequest—tried to obtain coins of full weight. Considering the large quantity of sovereigns to be remelted and recoined, this was a most important factor. Consequently they had to be in mint condition. The obvious choice was to acquire coins of the most recent mintage, 1838, for that date itself would guarantee against any possible weight loss through circulation (fig. 2).

Appendix II

The Columbian Institute's Numismatic Collections

In the minutes of its meetings, as well as in other papers of the Columbian Institute preserved in the Smithsonian Archives, Miscellaneous 92, we find records for approximately 60 accessions. The first donation, of 107 coins, was recorded at the meeting of December 17, 1825. These were presented by Dr. Tobias Watkins, a member of the Institute. The second donation, recorded on August 12, 1826, consisted of 110 ancient copper coins collected by officers of the United States' squadron in the Mediterranean in and around Tunis and transmitted on their behalf by Lieutenant Bell. Finally, in 1833, the Institute received from I. H. Causten, Jr., a medal commemorating the reform of the Constitution in Chile.

The Institute had been housed in the United States Treasury building from 1820 to December 7, 1822, when it moved to the basement of City Hall. It remained there until the latter part of 1824, when a Room 44 was assigned for its use in the Capitol building, under the library. We must assume that this small numismatic collection of 218 items was kept with the other objects or "curiosities" in the Institute's cabinet.

Appendix III

John Varden's "Washington Museum"

John Varden, according to his own account, had been a resident of the District since 1803. His decision to open a museum was prompted by the fact, as he noted, referring to the period before 1829, that three persons had opened and made very great collections with the help of generous citizens, and then moved away from Washington, "taking the many rich and scarce donations with them thus leaving the seat of the government without so valuable an institution."

In 1843 Varden became a self-appointed "curator" of the articles sent to the National Institute by the United States Exploring Expedition (1843–1853). When these materials were moved to the Smithsonian in 1858, he moved with them, and continued as an "arranger." His diary for 1857–1863 is preserved in the Smithsonian Archives. In January 1865 his health failed and he died on February 10, at the age of 74 years.[121]

Varden's records of his museum and its numismatic collections are preserved in the Smithsonian Archives under Miscellaneous 52. In general they are rather fragmentary and fairly continuous only for 1830. For the months of January through April 1830, we find 15 donors of numismatic materials listed, the number of pieces received amounting to 91. A. Mondellic, Jackson Gray, George Allen, C. Bentley, and J. Dunn are some of the names of donors mentioned. The latter may be identified with James C. Dunn, publisher of the *American Spectator and Washington City Chronicle* and the *National Messenger.*

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[118] See also Eckfeldt and Du Bois, op. cit., pl. VI, 8.

[119] *Catalogue of Coins, Tokens, and Medals in the Numismatic Collection of the Mint of the United States at Philadelphia, Pa.* (2nd ed., Washington, 1912, and 3rd ed. 1914), Part II, p. 448, nos. 202–203.

[120] A check of the United States Mint records at the National Archives was inconclusive in this respect.

[121] The obituary in *The Evening Star* of Saturday, February 11, 1865, recounts his museum career while *The National Republican* of the same date mentions that he was originally from Baltimore and that he served under General Jackson at the battle of New Orleans.

An analysis of all records preserved shows for the entire period from 1829 to 1841, 23 numismatic donors. The total number of numismatic objects indexed amounts to 246 specimens, among which are 4 medals, 24 silver coins, 69 copper coins, 136 coins or medals not further identified, and 13 Continental currency notes.

In the Smithsonian Archives there are on file under Miscellaneous 52 four catalogues of objects in John Varden's museum. For reference purposes these catalogues are designated A through D. They were prepared at various times and cover the period from 1829 to 1841 with varying degrees of completeness.

Catalogue A

"JOHN VARDEN'S MUSEUM" is a leatherbound index measuring 25 x 36.7 x 2.1 cm with entries on the first 28 pages, which are unnumbered. The first entry is dated October 1829 and the last is in June 1840. The most extensive entries are for January through April 1830 and most of the numismatic items are found in this period. There is little information for the years 1831 through most of 1835, since Varden lost his "small" catalogue at sea on August 11, 1835, as he notes on the fifth page. All information of numismatic interest in this volume is listed subsequently. To preserve the "Varden flavor," his spelling has been left unchanged. The information has been annotated and completed with additional information taken from the other three manuscript catalogues.

Catalogue B

"SUNDRIE ARTICLES COLLECTED FOR THE WASHINGTON CITY MUSEUM BEGINNING THE 20TH OF OCTOBER 1837."

This is a small leatherbound copybook with 44 unnumbered pages, measuring 15.4 x 22.3 cm. There are various numismatic entries and notes on pages 1 through 32, and 43 and 44. The entries on pages 2 through 27 covering the period from October 20, 1837, through May 1840, were canceled as though they had been transcribed into a permanent index.

Catalogue C

"JOHN VARDEN'S MUSEUM WASHINGTON CITY D. OF C."

This manuscript, measuring 20 x 31.8 cm, consists of eight double sheets, one of them serving as cover and title page. The first seven sheets are consecutively numbered with entries on only one side and contain a carefully written, frequently condensed version of his "accessions" for the period from October 1829 through July 1836. Values of the coins and medals listed are indicated in this inventory. Small pieces are valued at 6¼ cents each, larger ones at 12½ cents or one bit, a medal at 50 cents.

Catalogue D

"WASHINGTON MUSEUM, JOHN VARDEN PROPRIETOR"

This index gives a list of objects "as they were at the time a Committee from the National Institution examined them on exhibition . . ." in January 1840.

The manuscript measures 25 x 36.7 cm and consists of three unnumbered and 29 consecutively numbered pages with entries through page 20. It was prepared about 1855 since it mentions on page 1 that the objects had been in use for some 13 or 14 years.

JOHN VARDEN'S MUSEUM: A List of Numismatic Items

Page	No.		
2		1830, January	
		5 Peices of Old Copper coin	Antonious Mondellie
		2 Silver Coin of perrue	. . .
		1 Copper Coin	Jackson Gray
		2 Silver Coin	A Mondellie
		1 Canadian shilling	Nemiah Lewis
		2 Silver Coin of South America	. . .
		4 Peices of Copper Coin of England	Georg Allen
		1 Do of Silver	Do Do
		1 Silver Coin of South America	. . .
3		A Silver Cin of England 6 Pence made in 1567	Marlhey An Honewell
		February	
		A Silver Coin	
		9 Peices of Coin	Amy Patterson
			John Smith
			Marythey Ann Honewell
		1 Peice of Coin	William Harison
		2 Do of Do	. . .
		1 Medal by . . .	Jackson Gray
		3 Peices of Coin	. . .
		1 Silver Coin	. . .
		March	
		1 Silver Coin of England	A. Mondellie
		1 Silver Coin	Mr Clark
		1 Silver Coin of the East Indies	. . .
		1 Copper Coin ½ penney	Mr Clark
		1 Coin of France	. . .
4	22	Four Copper Coin	Bardarah Leighay
	26	Thirty five Copper Coin	Henry Banaster

Page	No.		
		April	
	28	A Silver Coin of Brisiels	. . .
		One East Indien coin clled the tash	George Stevenson
	33	A Copper Meddal of General Washington	James Dunn
		A Farthing token	I W Blair
	34	A Copper coin of Porlagale	James S. Rowe
	35	Four Silver Coin	. . .
		One Columbian Dollar	. . .
		Several Silver and Copper Coin	Mrs. Sarah M Cafferty
5		October	
	56	One of the smalles peices of Silver Coin	Mrs. Rosina Rowe
		1836, June & July	
	113	110 Pieces of Coin	Caleb Bentley
		June, 4th	
10	2	A Copper Meddal of the Second Presidency of George Washington in the year 1796	pt by Wm Durr
		June, 27th	
	21	6 Peices of Coin	pt by N M Ludlowe
		July, 6th	
11	42	110 Pieces of Coin and Meddals	Caleb Bentley
12	71	Three Copper Coin	C Bentley
13		September	
	94	Loand—A fine Meddal of Horatio Gates	to Loand and to be Returned if called for by Caleb Bentley
18		1838, September	
		Three Pieces of Old Coin	Joseph Ledger
25		1839, October	
		3 Copper Coins or Meddals	
		1 Impression of the first Doller coined in the United States	
26		November	
		13 Pieces Contenental Money Paid to the Officers of the U. States armey	by Col. J. H. Hook

* * *

[The following excerpts are from Ms. B]

Page No.

31 1841, February

11 [?] pieces of copper coin pt. by Lieutenant [blank]

32 March

A silver coin of [blank] pt. by Mr. Fisher.

Appendix IV

The National Institute

A. Numismatic Collections, 1841–1846

Four "Bulletins of the National Institute," 1841–1846, published in Washington contain records of donations of numismatic material received from about 70 different donors during that period.[122]

Arranged by categories, insofar as is possible, the Institute's collection consisted of: 70 United States coins; 160 or more ancient Greek and Roman pieces;[123] 1,810 medieval and modern bronze and silver coins; 6 modern gold coins; 1 Russian platinum coin; 580 or more paper currencies, most of them American Colonial and Continental issues; and 200 medals, of these about 54 United States pieces. These figures must be regarded only as estimates because the exact number of specimens received is not given in every entry. Of these donations received during a period of six years, only 2 percent of the total was United States coins. They included a "complete collection of dimes,"[124] and a half dollar of 1792,[125] possibly one of the extremely rare Washington pieces. The cabinet did include, however, a sizable number of Colonial and Continental notes, among them 67 Virginia issues.[126]

Worthy of note among the United States medals represented are 49 national medals sent in 1844 by Franklin Peale, chief coiner of the Philadelphia Mint.[127] Of particular interest is the listing attached by Peale which contains several significant remarks confirming a fact known from other sources—that in 1844, the presidential series issued by the Department of Indian Affairs did not include medals of Presidents Washington, John Adams, and Harrison. Peale emphasized the fact that the national medals were usually struck in silver.

Among the list of donors are the names of many prominent personalities of that period. The Honorable and Mrs. Joel Roberts Poinsett, Secretary of War (1837–1841), one of the founders of the National Institute and its first president, contributed many significant coins and medals, among them a Russian platinum piece.[128] Governor Kirke Paulding of New York, the popular writer and one-time Secretary of the Navy (1837–1841), donated among other pieces 8 ancient Greek and 45 Roman coins.[129] Members of the diplomatic corps and foreign representatives also contributed in a large measure to the increase of the collections. Charles Serruys, chargé d'affaires of Belgium, for instance, presented several meda's on behalf of his Government.[130] The first donation of numismatic material received for the cabinet of the National Institute came from the United States consul at Malaga, G. Read. It consisted of 24 Roman, Moorish, and Arabic coins.[131]

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[122] Howard L. Adelson, *The American Numismatic Society 1858–1958* (New York, 1958), p. 5, points out that "It is questionable whether there were actually three hundred numismatic collectors to be found in the United States in the year 1850." He draws this conclusion from a letter by Edward Cogan to the editor printed under the title "Concerning the Coin Trade in America" in the *American Journal of Numismatics* (New York, March 1867), vol. 1, pp. 86f. Actually Cogan indicates (p. 87) that "it may be fairly questioned, whether, at this time there could have been one hundred persons named, that were Coin Collectors, in the whole of the United States." While assuming that Cogan had in mind only active collectors his statement may be accepted only with caution and it certainly gains an entirely different perspective considering the large number of donors and donations received by the Institute between 1841 and 1846. It should also be considered that a large number of the donations were coming from a relatively limited geographical area in the United States.

[123] The number of ancient coins was probably much larger, possibly close to one thousand pieces. In fact, included among the modern bronze and silver coins is a "Collection of Coins, etc. eight hundred and fifty-three Copper, thirteen Silver" mentioned in the *Third Bulletin*, page 377, under February 10th, 1845, without indicating the name of the donor. This may well be the "collection of ancient coins" shipped by George Moore, United States Consul at Trieste, by the *Camilla* to New York, as he announced to the Institute in a letter dated June 22, 1844. Cf. *Third Bulletin*, page 365.

[124] *Third Bulletin of the Proceedings of the National Institute for the Promotion of Science, Washington, D.C. February, 1842, to February, 1845*, p. 347.

[125] *Second Bulletin . . . March, 1841, to February, 1842*, p. 224.

[126] *Third Bulletin*, p. 322.

[127] Ibid., p. 355.

[128] *First Bulletin*, p. 43; *Second Bulletin*, pp. 74, 83.

[129] *Third Bulletin*, p. 340.

Charles Rhind, former United States Commissioner to Turkey, gave a group of Russian coins and medals as well as several Turkish coins and some ancient pieces.[132] W. B. Hodgson, United States Consul in Tunis, also contributed a significant group of ancient mintings.[133] Certainly among the most assiduous donors was John P. Brown, "First Dragoman" in Constantinople, who contributed a large number of Turkish issues.[134]

A letter characteristic of the inspired interest of that period is preserved in an extract in the "Proceedings." It was written by Lieutenant Andrew A. Harwood, USN, from the New York Navy Yard on November 16, 1841, wherein he pointed out that "officers, particularly of the Mediterranean Squadron, may render very essential service to the Institution, the interests of which I feel assured they will all take a pride in advancing.[135]

"By means of that simple apparatus the Electrotype, perfect fac-similes of the choicest medals, both ancient and modern, may be collected; [136] and if the apparatus of Daguerre could be placed on board one of the ships, perfectly accurate views of the most interesting sites and monuments of classic history obtained." The record shows that Lieutenant Harwood donated in 1841 four electrotyped medals.[137]

The Institute maintained close ties with the Philadelphia Mint. Director R. M. Patterson was a corresponding member, as was Joseph Saxton, the ingenious inventor and constructor of the Mint's precision scales.

The numismatic collections of the young institution were also enhanced by Professor C. A. Holmboe, of Norway, who sent copies of his own publications to the library and donated 176 medieval coins, mostly Norwegian from the cabinet of Christiania University where he was teaching. He also sent duplicates for exchanges to be made by the National Institute.[138]

Characteristic of the wide support of numismatic endeavors was the donation by a "club of members" of copies of medals of French and English sovereigns, from William the Conqueror to Queen Victoria and Louis Philippe. These were electrotyped by Professor Wyatt and presented on May 18, 1843, by B. Ogle Tayloe of Washington.[139]

The Institute's medal collection benefited also from Alexander Vattemare's exchange arrangements between France and the United States. Through his efforts, the National Institute received numerous medals presented by eminent men in France, as well as works of art and books. Prominent French medallists joined the Institute as corresponding members; among them Jean Jacques Barre, Graveur Général de Médailles at the Paris Mint from 1842 to 1855; Jean François Antoine Bovy, the well-known medal engraver of Swiss extraction; the celebrated medallist André Galle, as well as his prolific colleague Jacques Edouard Gatteaux. Several of these medallists contributed examples of their work, through the good offices of Vattemare, to the collections.[140]

The records of the Institute yield the names of many prominent foreign numismatists of that period, such as the Polish Count Edouard Raczynski, the famous François Lenormant of France, and Count F. Szecheny from Hungary. Closer contacts were established with the noted medievalist Joachim Lelewel, living as a Polish expatriate in Brussels. A number of his publications were in the Institute's library.[141]

Official numismatic donations to the National Institute are listed in *Bulletins* of the early years (the original spelling and punctuation is preserved):

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[130] *Second Bulletin*, pp. 122, 127.

[131] On December 14, 1840, see *First Bulletin*, p. 14.

[132] *Third Bulletin*, p. 331.

[133] Ibid., pp. 235, 262.

[134] Ibid., pp. 274, 286; *Fourth Bulletin*, pp. 486, 493.

[135] *Second Bulletin*, pp. 127f.

[136] Electrotyping was in vogue at that time and frequently referred to as Professor Jacobi's process. In fact, it had been described by Dr. M. H. Jacobi of Dorpat, Russia, in *The London and Edinburgh Philosophical Magazine and Journal of Science* (London, 1839), vol. 15, pp. 161–163 ("On the Method of Producing Copies of Engraved Copper-plates by Voltaic Action").

[137] *Second Bulletin*, p. 121.

[138] Ibid., p. 98; *Third Bulletin*, pp. 340f.; *Fourth Bulletin*, pp. 487f, 496.

[139] *Third Bulletin*, pp. 302, 306. In the United States Mint records preserved at the National Archives, "Correspondence," there are letters dated March 2 and 9, April 26, and May 19, 1843, concerning Wyatt's request to obtain impressions in tin of medals, that should enable him to present medals in silver by the electrotype process to the National Institute.

[140] *Third Bulletin*, pp. 345, 347, 348, 380f; *Fourth Bulletin*, pp. 489, 494.

[141] *Second Bulletin*, pp. 80, 99; *Third Bulletin*, pp. 271, 274.

Bulletin of the Proceedings of the National Institution for the Promotion of Science, Washington, 1841.

Date Received	Item No.	Description and Donor
Dec. 14, 1840	14	Twenty-four Roman, Moorish, and Arabian coins, found near Velez Malaga. Spain—*From G. Read Esq., U.S. Consul at Malaga.*
Jan. 22, 1841	31	Copper coins.—*From James Gaither.*
	32	Head of Dr. Franklin (framed), executed according to the Galvanic process of Jacobi, Franklin Peale, Philadelphia.—*From Franklin Peale.*
	32	A medal.—*From Mrs. Ramsay.*
Feb. 8, 1841	43	. . . Medal, struck at the centenary celebration of the city of New Haven, Connecticut. Seven silver coins. Russian coin of Platina. Five medals commemorative of the French revolution achieved in the three days of the 27th, 28th, and 29th of July, 1830. Copies of two medals moulded by a natural deposit of carbonate of lime near Radicofani. . . .—*From Mrs. Poinsett.*
	44	. . . Three gold coins. Fourteen silver coins. Eight paras. Thirty-one copper coins.—*From Mrs. Offley, Georgetown.*
Feb. 8, 1841	45	Medal struck to commemorate a reform of the constitution of Chili in 1833.—*From J. H. Causten, jr.*

Second Bulletin of the Proceedings of the National Institution for the Promotion of Science, Washington, D.C., March, 1841, to February 1842

Date Received	Item No.	Description and Donor
March 8, 1841	70	Box of ancient coins.—*From Dr. T. B. J. Frye.*
April 12, 1841	75	Medal struck at the celebration of the Shakspeare Jubilee in 1769.—*From Hon. Joel R. Poinsett.*
	79	Medal commemorating the opening of the Liverpool and Manchester Rail-Road.—*From Hon. Joel R. Poinsett.*
May 10, 1841	80	Silver Coins and Minerals.—*From Mr. Kervand.*
	80	Numismatique du Moyen Age, &c., par Joachim Lelewel, 2 vols, 8vo., . . .—*From Mr. Kallussowski, West River, Md.*
June 14, 1841	83	Silver and Copper Coins—*From Mrs. Poinsett.*
	83	Silver and Copper Coins—*From Hon. J. R. Poinsett.*
July 12, 1841	93	Medal commemorating the union of the waters of Lake Erie with the Atlantic.—*From Lieut. John S. Chauncey, U.S.N.*
Aug. 9, 1841	97	Gold Coin, called Buntagee, coined in the city of Fez, in the year of the Hegira 1251, (A.D. 1835)—*From J. F. Mullowney.*
	97	Silver Coin of the Emperor Muley Abdallah, coined in Morocco and named Citsushyee.—*From J. F. Mullowney.*
	98	De prisca Re Monetaria Norvegiae, with plates by Professor C. A. Holmboe, Christiana, Norway, 1840: transmitted by the Hon. Christopher Hughes, Chargé d'Affaires of U.S. to Sweden.—*From the Author.*

Date Received	Item No.	Description and Donor
	99	Sur les Medailles et Monnaies de Foux, par M. Lelewel, Bruxelles, 1837; (a bibliographical rarity,) in the Polish language.—*From H. Kallussowski, West River, Maryland.*
Sept. 13, 1841	104	Seven Medallions in Plaster—*From W. C. Gill.*
Nov. 8, 1841	118	One Five-Pound Note, 1759, Pennsylvania.—*From the same.* (*Benjamin C. Burt, Warwick, Orange County, New-York.*)
Nov. 8, 1841	118	One Dollar Note, 1775, Maryland.—*From the same.*
	118	Coins—*From Dr. Hanson Penn.*
Dec. 13, 1841	121	Four medals, electrotyped by the same (Lieut. Harwood).—*From the same* (*Lieut. Andrew Allen Harwood, U.S.N.*).
	122	Four Medals. No. 1. Struck by the Royal Society of Sciences, Letters and Arts of Antwerp, on the occasion of the bis-secular fêtes in honor of Rubens. No. 2. Of the National Exhibition of Fine Arts, in 1839, intended as a national reward. No. 3. Commemorative of the opening of the First Section of the Belgian Rail Roads in 1834. No. 4. Struck in honor of the Regent of Belgium.—*From Mons. Charles Serruys, Belgian Minister, in the name of the Belgian Government.*
	127	From M. Serruys, Chargé d'Affaires of Belgium, Belgian Legation, Washington, December 8, 1841. Dear Sir: In addition to the Antique Roman Lamp, which you had the kindness to accept in my name for the National Institution, I hope you will allow me to offer you now— 1st. A medal struck by the Royal Society of Science, Letters and Arts of Antwerp, on the occasion of the bis-secular fêtes in honor of Rubens. 2d. A Medal of the National Exhibition of Fine Arts in 1839, intended as a national reward. 3d. A medal commemorating the opening of the first section of the Belgian Rail-Road, in 1834. 4th. A Medal struck in honor of the Regent of Belgium. These Medals are presented by me, in the name of the Belgian Government, as a proof of the warm interest in the establishment and prosperity of the National Institution for the Promotion of Science, founded at the seat of Government, which is destined, I believe, to shed lustre on the United States.
	127	From Lieutenant Harwood, U.S. Navy (Andrew A. Harwood) (Extract) U.S. Navy-Yard, New York, November 16, 1841 My Dear Sir: . . . . But I beg to remind you that they [certain objects] are not forwarded so much for their novelty or intrinsic value as to point out a way in which the officers, particularly of the Mediterranean Squadron, may render very essential service to the Institution, the interests of which I feel assured they will all take a pride in advancing.

Date Received	Item No.	Description and Donor
		By means of that simple apparatus the Electrotype, perfect fac-similes of the choicests medals, both ancient and modern, may be collected; and if the apparatus of Daguerre could be placed on board one of the ships, perfectly accurate views of the most interesting sites and monuments of classic history obtained."
Feb. 14, 1842	147	Antique Silver and Copper Coins, from Syria, Greece, and Samos.—From the same. [Captain W. K. Latimer, U.S.N.]
	147	Antique Copper Coins, from Baiae.—*From the same.*
	149	Coins, (copper.)—*From Martin Johnson.*
	149	Medal, (copper).—*From Robert Graham.*
	149	Coin of United States, 1783.—*From George W. Palmer, Baltimore.*
	149	Coins, of United States.—*From James Callaghan.*
	149	Continental Paper Money, (1776).—*From Dr. T. B. J. Frye.*
	149	Coins, Silver and Copper, (eleven pieces.)—*From Wm. Shoemaker.*
	149	Coins, Copper, (thirty-eight pieces.)—*From R. B. Fowler.*
	149	Medal, Spanish.—*From George Shoemaker.*

Third Bulletin of the Proceedings of the National Institute for the Promotion of Science, Washington, D.C., February, 1842, to February, 1845.

Date Received	Item No.	Description and Donor
Apr. 11, 1842	224	One Cent, coin of 1783; one Cent, coin of 1787.—*From William Blanchard.*
	224	Half Dollar, emission of 1792.—*From George M. Davis.*
May 9, 1842	233	Coin, antique.—*From Wm. Kemble, Esq., New York.*
	233	Copper Coins.—*From A. T. Cavis.*
	233	Copper Coins.—*From David Myerle, Kentucky.*
	235	From W. W. Hodgson, U.S. Consul, Tunis, March 1, 1842: Presenting one hundred ancient coins, with observations on the subject. Will forward others, &c.
June 13, 1842	236	Five Copper Coins.—*From Thomas Birch, Jr.*
	236	Seven Pieces of Copper Coin.—*From J. J. Greenhough.*
	237	Five Pieces of Coin.—*From A. W. Deorselling.*
July 11, 1842	243	Eleven pieces of Coin.—*From J. P. Couthouy.*
	243	Two Notes, (1840 and 1841.)—*From Charles H. James.*
	243	One Note, of the City of Macon, Georgia, 1840 . . .—*From A. C. Van Epps.*

Date Received	Item No.	Description and Donor
	244	Medallion head of Cabot, from a design by Chapman.—*From Chas. Gill.*
	244	—*From Rev. Mr. Curly. Georgetown College* . . . Several Copper Coins. . . .
Aug. 8, 1842	246f	A Manual of Gold and Silver Coins of all Nations struck within the past century, showing their history and legal basis, and their actual weight, fineness and value, chiefly from original and recent assays: with which are incorporated Treatises on Bullion and Plate, Counterfeit Coins, Specific Gravity of Precious Metals, &c.; with recent statistics of the Production and Coinage of Gold and Silver in the world, and sundry useful Tables; by Jacob R. Eckfeldt and William E. Du Bois, assayers of the Mint of the United States, illustrated by numerous engravings of coins, executed by the medal-ruling machine, and under the direction of Joseph Saxton, of the United States Mint; Philadelphia, 1842, quarto.—*From the Authors.*
	249	From J. D. Doty, Madison, Wisconsin Territory, July 2, 1842: Sending impressions on wax, of a coin found in the ruins of Aztalan. Hopes the Institute will be able to throw light on the subject, by comparing it with other coins. Enclosing printed description of Aztalan.
	249	From Jacob R. Eckfeldt and Wm. E Du Bois, U.S. Mint, Philadelphia, July 11, 1842: Presenting a recent work by them, on coins and precious metals.
	249	From George R. Morton, M.D., Sandusky, Ohio, July 15, 1842: Asking information respecting the Institute, to which he wishes to make contributions of coins, minerals, &c. Inquiring, also, how presents are to be forwarded, and the terms of membership, &c.
Sept. 12, 1842	251	Twelve pieces of Copper Coin.—*From Jeremiah Sullivan.*
	252	Copper Coin.—*From E. P. Baily.*
	252	Copper Coins.—*From Henry Hardin.*
	252	One Copper Coin of 1822.—*From Joseph Boss.*
	252	Five Copper Coins.—*From G. W. Harris.*
	252	Two Notes, of five cents each, Philadelphia.—*From W. S. Walker.*
	253	Copper Coins.—*From James D. Cox.*
	254	. . . one Silver Coin, and four small Bank Notes.—*From Margaret Julien.*
	255	. . . A number of specimens of Continental Money . . .—*From Dr. John Redman Coxe, Philadelphia.*
	258	*From W. H. Smyth, Chelsea, England,* August 20, 1842: Acknowledging bulletin No. 2, and forwarding his privately printed catalogue of Roman brass medals; also, specimens of impressions of the head of Hipparchus, from the Poniatowski-gem. intended as a vignette illustration of his work.

Date Received	Item No.	Description and Donor
Nov. 14, 1842	262	. . . 3,289 Dollars Continental Money, (including counterfeits).—*From H. H. Sylvester.*
	262	Twenty-two Ancient Roman Coins.—*From W. B. Hodgson.*
	262f	. . . one hundred and forty-two pieces of Continental Paper Money.—*From John Redman Coxe, M.D.*
	263	Eight Copper Coins, collected on the Exploring Expedition.—*From David Smith.*
	265	Descriptive Catalogue of a Cabinet of Roman Imperial large Brass Medals, by Capt. W. H. Smyth, R. N., &c.; Bedford, 1834, quarto. . . . —*From Capt. W. H. Smyth, R. N.*
Dec. 12, 1842	271	Continental Note of forty dollars, Philadelphia, 1778.—*From Carr B. Thornton.*
	271	Two English Copper Coins.—*From Captain Easby.*
	271	Two Silver Coins of Mexico.—*From Rev. Mr. Richards.*
	271	Etudes Numismatiques et Archeologiques, par Joachim Lelewel; octava, Bruxelles, 1840. . . . —*From Joachim Lelewel, Bruxelles.*
	274	*From John P. Brown, First Dragoman, Constantinople,* September 27, 1842: Stating that he has forwarded to the Collector at Boston a series of coins of the Ottoman Empire, one hundred and ninety-three in number; and that he will forward other coins as he collects them.
	274	*From Joachim Lelewel, Brussels,* October 19, 1842: Acknowledging with thanks the honor of membership conferred upon him, and presenting several works of which he is the author.
Jan. 9, 1843	278	American Medals struck in France, presented by *Mr. Brent.* Owned originally by the American Historical Society, reported "wanting" by the curator, Dr. H. King.
Feb. 20, 1843	279	Two Continental Notes.—*From John T. Towers.*
Feb. 20, 1843	279	One Continental Note of Rhode Island.—*From Joseph M. Lyon.*
	279	Copper Coin.—*From Master Kendall.*
	279	One three cent Note of the State Bank of New York.—*From H. L. Ellsworth.*
	279	One English Copper Coin of 1738.—*From Joseph S. Hedges.*
	280	Eight Copper Coins, six Silver Coins, and eleven Tokens.—*From James Howks.*
	280	One Corporation Note of Washington City.—*From S. P. Franklin.*

Date Received	Item No.	Description and Donor
	280	One Silver Coin of Prussia, 127 years old.—*From Maurice Whail, Baltimore.*
Apr. 10, 1843	286	Box, containing a series of Coins of the Ottoman Empire (one hundred and ninety-three in number).—*From John P. Brown, First Dragoman of of the U.S. Legation, Constantinople.*
	286	Five Copper Coins.—*From Dr. Wm. Wallace.*
	287	One Silver Coin.—*From Edward Stubbs.*
	287	One German Coin.—*From Edward Smith, Philadelphia.*
	287	Two Coins.—*From George Henley.*
	287	One Silver Token, or Bank of England Dollar, George III, 1804.—*From George A. Davis, Washington.*
	287	Two Continental Notes.—*From George Lindweaver, Pennsylvania.*
June 12, 1843	302	. . . Piece of Chinese Money.—*From R. Bright.*
	302	Medals—two series; the first embracing the British Sovereigns from William the Conqueror to Queen Victoria; the second, those of France from Pharamond to Louis Phillippe; electrotyped by Professor Wyatt.—*From a club of members.*
	303	Paper Money on a Sheet.—*From*
	304f	*From John P. Brown, Dragoman, Chargé, &c., at Constantinople,* April 12, 1843: Has forwarded to the Collector at Boston a box for the Institute, containing Turkish weapons and other things, of which he encloses a list; is collecting coins, &c.
	306	*From B. Ogle Tayloe, Washington,* May 18, 1843: Stating that two series of rare medals of French and English sovereigns, from William the Conqueror and Pharamond to Queen Victoria and Louis Phillippe, electrotyped by Professor Wyatt, have been purchased by a club of members and presented to the Institute.
July 10, 1843	308	Eleven pieces of Copper Coin.—*From Henry Polkinhorn.*
Oct. 9, 1843	309	Silver Coin of Philip V of Spain, 1724.—*From William Anderson.*
	309	Coin, George III, Virginia, 1773.—*From John Carroll Walsh, Baltimore County, Maryland, by the hands of the Hon. Secretary of State.*
	309	Coins of Central America.—*From J. W. Simonton.*
	312	*From John Carroll Walsh, Baltimore County, Maryland,* July 26, 1843: Telling him that the Secretary of State has presented the coin he sent, and his letter to the Institute.

Date Received	Item No.	Description and Donor
	315	*From William Anderson, Washington*, July 1, 1843: Presenting a coin of Philip V of Spain, 1724.
	315	*From John Carroll Walsh*, (to Secretary of State,) *Baltimore County, Maryland*, July 4, 1843: Presenting a coin of George III, Virginia, 1773.
	317	*From Col. J. J. Abert, Washington*, August 7, 1843: Presenting, in the name of J. W. Simonton, a package of coins of Central America.
Nov. 13, 1843	319	Copper Cent of America, Washington and Independence, 1783.—*From Capt. J. S. Inglee.*
	320	. . . five pieces of Continental Paper Money.—*From J. Templar.*
	320	Copper Coin of George II, of England.—*From Daniel Holmes.*
	320	Copper Coin, with the Lord's Prayer on one side, a Crown and Halo on the other.—*From Peter Callan.*
Dec. 11, 1843	322	Two packages, containing sixty-seven Virginia Provincial Notes and twenty-four Maryland Provincial Notes.—*From Francis B. Mayer Baltimore.*
	322	Collection of rare Coins and Medals, as follows.—*From Charles Rhind, of New York, late U. S. Commissioner to Turkey.* 1 Russian Medal, struck after the capture of Parma from the Turks. 2 Russian Medal, on the peace with Turkey. 3 Russian Medal, on the death of the Empress, widow of Alexander. 4 Turkish Piastre, of the year 1143, (of the Hegira.) 5 Silver Rouble of Russia, 1829. 6 Coins of Russia, 1830. 7 Para of Turkey, (hardly now to be found.) 8 Greek Coin, of very remote antiquity. 9 Aspre, reign of Sultan Selim, (extremely rare.) 10 Gold Coin, Mahmoud 2d, 20 piastres. 11 Gold Coin, Mahmoud 2d, 5 piastres. 12 Turkish aspres and Paras, of various dynasties, (all extremely rare.) 13 Turkish Coins, Mahmoud 2d.
	323	Three Shilling Note of New Jersey, of George III, March 25, 1776; a Cent, Washington, 1782.—*From John P. Bethell, M.D., Philadelphia.*

Date Received	Item No.	Description and Donor
	323	Copper Coin of Virginia, 1773.—*From J. H. Causten, Jr., M.D.*
	323	Three Notes, Baltimore money, 1840, sent by mail.—*Anonymous.*
	326	To J. P. Bethell, M.D., Philadelphia, November 3, 1843: Acknowledging letter, and sending a coin of 1783.
	327	*From D. C. Croxall, U.S. Consul, Marseilles,* August 5, 1843: Enclosing a letter from Monsieur Dan. Groux, an antiquary, offering for sale a large and valuable collection of coins, medals, &c.
	327	*From W. W. Irwin, Chargé, &c., Copenhagen,* August 28, 1843: Stating that Mr. Lay, our Chargé at Stockholm, had placed in his hands for the Institute some curious Swedish coins, which he has handed to W. Gordon Reed, of Boston, by whom they will be sent to Washington.
	329	*From Francis B. Mayer, Baltimore,* October 1, 1843: Presenting two packages continental money, &c.
	331	*From Charles Rhind, late U.S. Commissioner to Turkey, New York,* November 17, 1843: Transmitting to the Hon. H. Fish, of New York, for the Institute a collection of very rare Turkish coins of which he encloses a list &c.
Jan. 8, 1844	340	Forty-five Roman Coins, (forty-four silver, one bronze); fifteen mixed Coins, (fourteen silver, one bronze;) two Alexander Coins, (silver;) nine Corinthian Coins, (silver;) eight Greek Coins, (silver;) seven Egyptian Coins, Ptolemies, (one silver, six bronze.)—*From Gouverneur Paulding, New York.*
	340	Box, containing one hundred and seventy-six small Coins, of the middle age, chiefly from Norway, of fifty-six different Stamps, and many duplicates to enable the Institute to exchange, from the Numophylacium of the University of which he is Professor.—*From Professor C. A. Holmboe, Christiania, Norway.*
	341	Descriptio Ornamentorum Maximam Partem Aureorum et Numorum Saeculi VIIIvi et IXni, etc. etc. by Professor C. A. Holmboe, 1835.— . . . De Prisca Re Monetaria Norwegiae, by the same, 1841.—*From Professor C. A. Holmboe, Christiania, Norway.*
	345	*From Alexandre Vattemare, Paris,* December 10, 1843: Explaining his system of exchanges as it concerns the National Institute, &c., forwarding a large collection of books, &c., in advance of a still larger collection he has on hand for the Institute, on which he expects expenses paid, &c.; and accompanying his letter with various printed and manuscript documents showing the steps he has been taking to promote exchanges of books, works of art, &c., &c., between France and the United States, &c.

Date Received	Item No.	Description and Donor
May, 1844	347	Two large boxes, containing Books, Engravings, Medals, &c.—*From Alexandre Vattemare, Paris.*
	347	Package of Continental Money.—*From Thomas Pratt, Philadelphia.*
	347	Package of large and curious Swedish Coins.—*From George W. Lay, U.S. Chargé d'Affaires, Stockholm.*
	347	Medal—Head of Alexandre Vattemare.—*From M. Vattemare.*
	347	Coin, found in the District of Columbia.—*From Captain R. France.*
	347	Box, containing a complete collection of dimes . . . —*From* [blank]
	348	Two Boxes, containing a large and valuable collection of Books, Engravings, Medals, &c., of which a list is given.—*From Alexandre Vattemare, Paris.*
	348	Descriptive Catalogue of a Cabinet of Roman Imperial large Brass Medals, by Capt. W. H. Smith, Royal Navy, &c., &c., Bedford, 1834, quarto.—*From Captain J. H. Aulick, U.S. Navy.*
	354	*From H. Ledyard, U.S. Chargé d'Affaires, Paris,* March 15, 1844: . . . stating that he has forwarded, via Havre, by the packet Duchesse d'Orleans, two more boxes, containing books, engravings, medals, &c., from M. Vattemare, &c.
	355	*From Franklin Peale, Chief Coiner, U.S. Mint,* to Mr. Spencer, Secretary of the Treasury, Philadelphia, March 28, 1844: Presenting to the Institute a full series of the national medals, fourty-nine in number, of which he encloses, with the medals, a catalogue, &c.
	355f	*List of National Medals presented to the National Institute, by Franklin Peale, Chief Coiner of the Mint of the United States,* 1944.

PRESIDENTIAL SERIES

The dies of this series were constructed for the Department of Indian Affairs. The medals are usually struck in silver.

No. 1. Jefferson; No. 2, Madison; No. 3, Monroe; No. 4, J. Q. Adams; No. 5, Jackson; No. 6, Van Buren; No. 7, Tyler.—Whole number, 7.

Dies of Presidents Washington, John Adams, and Harrison, have not been constructed.

MILITARY SERIES

Army.—The two first of this series are in honor of Revolutionary services, and were originally struck soon after the close of that war; the remainder in honor of services during the late war.

No. 1, Gates; No. 2, Morgan; No. 3, Scott; No. 4, Miller; No. 5, Gaines; No. 6, Porter; No. 7, Brown; No. 8, Ripley; No. 9, McComb; No. 10, Jackson; No. 11, Shelby; No. 12, Harrison; No. 13, Croghan. Whole number, 13.

Navy.—All of this series were struck in honor of services during the late war.

No. 1, Hull; No. 2, Jones; No. 3, Decatur; No. 4, Bainbridge; No. 5, Perry; No. 6, Perry's crew; No. 7, Elliott; No. 8, Burrows; No. 9, McCall; No. 10, Lawrence; No. 11, Macdonough; No. 12, Henley; No. 13, Cassin; No. 14, Warrington; No. 15, Blakeley; No. 16, Stewart; No. 17, Biddle.—Whole number, 17.

ELECTROTYPE SERIES

This series has been copied from medals, the dies of which were constructed in other countries or are lost.

The medal voted to Capt. Stewart has not been recovered.

No. 1, Washington; No. 2, Wayne; No. 3, Fleury; No. 4, Col. Washington; No. 5, Captors of André; No. 6, Howard; No. 7, Green; No. 8, Preble; No. 9, Jones.—Whole number, 9.

ADDITIONAL SERIES

No. 1, State of Pennsylvania to Perry; No. 2, Inauguration, Van Buren; No. 3, Visit to the Mint, Tyler.—Whole number, 3.

Aggregate number, 49.

Date Received	Item No.	Description and Donor
	357	*From Hon. George P. Marsh, House of Representatives*, April 4, 1844: . . . inquiring . . . about the Norwegian coins presented by Professor Holmboe, of Norway.
	359	*From Thomas Pratt, Philadelphia*, April 30, 1844: Presenting a package of Continental money.
Sept., 1844	365	*From George Moore, U.S. Consul, Trieste*, June 22, 1844: . . . presenting a collection of ancient coins, which he has shipped by the Camilla to New York.
Dec. 9, 1844	369	Box, containing one large Silver Medal; one large Copper Medal; twenty-seven Silver Coins; seventy-one Copper Coins; two Strings Chinese Cash.—Box, containing seven Coins, found at Pestum, Italy.—*From Mrs. Anne Izard Deas.*
Feb. 10, 1845	377	Collection of Coins, Medals, &c.—*From Mrs. Anne Izard Deas.*
	377	Collection of Coins, &c., eight hundred and fifty-three Copper, thirteen Silver.—*From* [blank]
	377	Medal, Head of J. Fennimore Cooper: "The personification of honor, truth, and justice;" reverse, "To J. Fennimore Cooper, the offering of a grateful heart, for his disinterested vindication of his brother sailor, Jesse D. Elliott."—*From Commodore J. D. Elliott.*

Date Received	Item No.	Description and Donor
	380f	*From A. Vattemare, Paris*, December 26, 1844: Stating that he has forwarded, via Havre, a large box, containing eighty-six volumes, and thirty-one medals, presented by eminent men in France, and will forward by next packet the Journal des Savans, and other works; has sent by same opportunity a large number of volumes, engravings, medals, sc., for several States of the Union, &c., &c., &c.

Fourth Bulletin of the National Institute for the Promotion of Science, Washington, D.C., February, 1845, to November, 1846.

Date Received	Item No.	Description and Donor
	485	*From D. Groux, New York*, June 15, 1845: On the subject of his large ard valuable cabinet of coins, medals, &c., offered by him for sale to the Institute.
	486	**From John P. Brown, U.S. Dragoman, Constantinople*, September 25’ 1845: Describing a series of oriental coins presented by him to the Institute, &c.
	487f	*From C. A. Holmboe, Professor of Oriental Languages. Christiania, Norway*, May 2, 1846: Transmitting to the Institution, by the hands of M. Lövenskiold, the newly appointed minister of Sweden and Norway, a bronze medal of the late king, Charles John, in his coronation dress, at Drontheim, struck by the city of Christiania twenty-five years after the event; also, three coins struck by King Oscar, &c.
	488	*From D. C. Groux, Philadelphia*, June 6, 1846: Transmitting a complete catalogue of his collection of coins and medals, eight thousand two hundred and seventy-two in number, which he offers to the Institute at a low price.
	488	*From M. Serope M. Alishan, Constantinople*, June 17, 1846: Giving a historical account of the Armenian medals presented by him to the Institute.
	489	**From A. Vattemare, Paris:* Transmitting a descriptive catalogue of books, engravings, statutes, medals, maps, &c., presented by ministerial departments, societies, and eminent persons in France, placed in charge of the Hon. Reverdy Johnson, U.S. Senator from Maryland.
	493	Box of Oriental Coins, &c.—*From J. P. Brown, Dragoman, U.S. Legation, Constantinople.*
	494	Box containing Medal of General Lafayette, by M. Gatteaux; ten large Medals, Six Medals, Five Medallions, by M. Galle.
	494	Two boxes, containing valuable Books, Medals, Medallions, Statues, &c., from different branches of the French Government and eminent men of France.—*Sent by M. Vattemare, Paris, under the care of Hon. Reverdy Johnson, of Baltimore.*

Date Received	Item No.	Description and Donor
	496	Six rare Armenian Coins of the Rupinyan Kings, between the eleventh and thirteenth centuries.—*From S. M. Slishan, of Constantinople.*
	496	Medal of Charles John of Norway; three Coins of King Oscar, of Sweden.—*From Professor C. A. Holmboe, Norway.*
	496	Copper Coin, Geo. III, 1773, Virginia.—*From Edward Stubbs.*

Appendix IV

The National Institute

B. Varden's Catalogue

The manuscript catalogue prepared by John Varden is preserved in the Smithsonian Archives in Miscellaneous 52.

"Things belonging to the Patent Office and State Department in the National Gallery September 1, 1852." This notation in John Varden's handwriting appears on the front of a manuscript inventory with gray covers, measuring 16.5 x 19.1 cm and consisting of 18 unnumbered leaves, with entries extending from leaf 1 through leaf 12. Below, someone added, "This Catalogue was prepared by M. John Varden, Curator in the Gallery of the U.S. Patent Office, and subsequently at the Smithsonian Institution until his death." Varden never was a curator of the National Institute, but we are, nevertheless, indebted to him for the care with which he noted certain numismatic exhibits.

This catalogue concerns objects which belonged to the Patent Office and the Department of State and were on deposit only in the displays of the National Institute. The catalogue lists 6 United States and 28 foreign medals, some coins of Morocco, an American Colonial note, and some primitive media of exchange. In the following excerpts containing all data of numismatic interest in the catalogue, John Varden's spelling has been retained.

Page

[2] A list of articles belonging to and under the controle of the Patent Office proper and now in the Hall of the National Gallery
September 1st 1852

. . .

+A. medal of the King of Sweden (Barnadott) in cast iron

. . .

Two medals in cast iron presented by the Society of Beneficence of Cracow to the President of the United States. James Munroe

. . .

A. Case of coin of Morocco . . . [Cancellations] Som taken by T. Hond. Nov 9th 1848

[3] . . .

Two Copper Medals of Horatio Gates
Two Do Do of Nathan Green
One Do Do of Neopolian 1st Consul
Two Silver Do of National Congress
Two Do Do of Leapold 1st King Benges

[4] Two Silver Modals of Leapold
Two Do Do not mad[e] out
Two Do Do Regent of Belgeum
Two Do D not mad[e] out
TwelveDo East side of case No. 24.
Four Do North End of case 24 small.

[10] One Specimen of Brick Tea from the Province of Yunann, China by George West June 19th 1850

[15] . . .

One Piece of Provincial Money

. . .

[17] 7. By Orders from the Coms of Patents One Medal of General Green was Exchanged with

Page

Dr Lewis Roper of Philadelphia for a Medal of Georg Washington Decr 28th 1844. H. L. Ellsworth

[18] 10 Washington City Janr 29th 1845
Purser Bridge presents his compliments to Mr Ellsworth and sendes for the National Gallery a few curiosities from Africa and of which he mentioned to Mr Ellsworth yesterday and of which the following is a list unciantific language Native Money from Sett[ra?] Koroo Africa Made of Old brass run in moulds of sand value $1.50. small Cowries sewd upon cloth Native Money value 25 cts. . . .

[23] . . .
35 Brick tea from the Province of Yunann. China . . . by Mr George R West June 19th 1850. Ths Ewbank Coms of Pats.

APPENDIX IV

The National Institute

C. Hunter's Guide

More comprehensive than John Varden's catalogue is a guidebook published in Washington in 1855 which describes displays arranged by the National Institute in the Patent Office Building. Alfred Hunter's guidebook is entitled *A Catalogue of the Extraordinary Curiosities of the National Institute to be seen in the Patent Office Building; also a Catalogue of the Botanical Plants, to be Seen in the Government Conservatories, Foot of the Capitol* (Washington, 1855). A later edition of Hunter's guidebook was published in Washington in 1859 under the title: *A Popular Catalogue of the Extraordinary Curiosities in the National Institute Arranged in the Building Belonging to the Patent Office.*

The following are excerpts of numismatic interest from Hunter's 1855 catalogue.

Page

17 Opposite Case 6
A collection of Continental and Provincial money; one for 20 shillings, dated 25th April, 1776, issued by the Assembly of Pennsylvania in the name of George III, and printed by Benjamin Franklin; also what was called shin-plasters in later times issued all through the U.S. at various times. Some of the old Continental money was redeemed, but the greater part was lost in the hands of the owners.

Page

21 Case 9
100 to 103. Gold and zinc coins from Japan.

22 Case 10
Copper coin of the Republic of Chili. Has a single five-pointed star in the centre, is worth one and a quarter of our cents. Presented by Lieut. George W. Hammersly, Ex. Ex.

23 Case opposite 11—Indian Curiosities.
. . . prepared skins, wampum, pipes, necklace made with beads and the claws of the grizzly bear.

43 Case 28
Collection of ancient coins, collected in different parts of Europe by Thomas Munroe, while aid to the Emperor of Russia: presented by his father.

. . .

Medals by the government of Belgium; medals of the Royal Society of Sciences, Letters, and Arts of Antwerp, on the occasion of the Rubenical fetes, in honor of Rubens—one given by the National Exhibition of Fine Arts, in 1839, and intended as a national reward; one commemorative of the opening of the first section of the Belgian railroad, in 1834—by Chas. Serruys, Belgian minister.

44 Case 29
Money from Africa. Another piece of the value of $1.50; four of these buys a good sized negro boy.

33 Case 24
. . . Medals from the Belgian government, struck on the occasion of the inauguration and completion of the great railroad. The great seal of the United States.

. . .

Box of old Spanish coins.
Medals.

Page

35 Window opposite Case 24

Provincial money of Pennsylvania, printed by Benjamin Franklin.

Continental money.

An engraving showing the clemency of Napoleon.

Page

38 Case 27

Muskrat—common American kind. Formerly they constituted a large item in the northwestern fur trade, and have been sold by traders to manufacturers for 37½ cents a-piece. In some parts of the Middle States they are raised or propagated for market. The pelts of the early spring rats are the best.

APPENDIX V

Numismatic Collections in U.S. Public Libraries, 1850

The findings given in Charles Coffin Jewett's 207-page report entitled "Appendix to the Report of the Board of Regents of the Smithsonian Institution, Containing a Report on the Public Libraries of the United States of America, January 1, 1850" was published separately in 1851 as an appendix to the *Fourth Annual Report of the Board of Regents of the Smithsonian Institution . . . During the Year 1849* (Washington, 1850). In spite of an unavoidable lack of completeness this report is of great value to us.

More than 900 circulars had been sent out plus hundreds of additional letters requesting detailed information from the various libraries about their organization and their holdings including coins and medals. Many circulars remained unanswered, "others were filled out hastily, and gave but a meagre account of the collections; others, again, simply referred to some source from which authentic details might be gathered."[142] Jewett was forced, therefore, to seek additional information wherever available.

Over 40 libraries in 14 different States had collections of coins and medals: Massachusetts led with ten collections, followed by Pennsylvania with six, and New York with five collections. Some holdings were small, limited in scope, and hardly merit being designated as collections, while others contained up to 2,000 pieces. It is remarkable that St. Joseph's College in Bardstown, Kentucky, had a collection of 400 medals of each century from the 15th through the 18th. The collection of 8,000 "sulphurets" of ancient Roman and other coins in the "Libraries of the College of New Jersey" at Princeton seems to indicate a serious interest in numismatic research.

The following are items of numismatic interest excerpted from the Jewett report. Page references are to Jewett's Appendix and not the *Report*.

LIBRARY	*FOUNDED*	*REPLY*
The New Hampshire Historical Society Concord, N.H.	Mar. 13, 1823	"ancient coins" (mentioned as being in their collection already in 1838), (p. 11).
Athenaeum Library Portsmouth, N.H.	1817	"246 coins" (p. 14).
State Library Montpelier, Vt.		"thirty medals" (p. 17).
The Boston Athenaeum Library Boston, Mass.	organized 1806 incorporated 1807	"the most valuable collection of coins in that part of the country" (p. 21).

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[142] CHARLES C. JEWETT, "Appendix to the Report of the Board of Regents of the Smithsonian Institution, Containing a Report on the Public Libraries of the United States of America, January 1, 1850," in *Fourth Annual Report of the Board of Regents of the Smithsonian Institution . . .* Washington, 1850, p. 5.

LIBRARY	*FOUNDED*	*REPLY*
Library of the General Court Boston, Mass.	Mar. 3, 1826	"6 medals" (p. 24).
Library of the Massachusetts Historical Society Boston, Mass.	organized 1791 incorporated 1794	"a few coins" (p. 26).
The American Oriental Society Boston, Mass.	"Recent"	"68 Muhammedan coins"
Harvard College Libraries Cambridge, Mass.		"Of Roman coins and medals, the library has 671 in copper, 43 in silver, and 1 in gold; of ancient coins other than Roman, 8; there are about 500 modern coins of all sorts, and 35 modern medals" (p. 33).
The Athenauem Library Nantucket, Mass.	1836	"several hundred coins of small value" (p. 38).
Library of the Essex Institute Salem, Mass.	1848	"a few coins" (p. 41).
Williams College Libraries Williamstown, Mass.	1793	"a very few coins" (p. 41).
Library of the American Antiquarian Society Worcester, Mass.	Oct. 24, 1812	"medals" (p. 43). "The cabinet contains a collection of coins, comparatively small, but amounting to nearly 2,000 pieces, of which, however, many are duplicates. Among them is a considerable number of coins of the Roman Empire, and a few said to be of still more remote antiquity. It is believed there are specimens of nearly all the pieces of money ever struck in the present United States" (p. 45).
Library of the College of the Holy Cross Worcester, Mass.	1843	"650 coins and medals" (p. 47).
Wesleyan University Libraries Middletown, Conn.	1831	"coins" (p. 68).

LIBRARY	*FOUNDED*	*REPLY*
State Library, Department of the Miscellaneous Library Albany, N.Y.	1818	"Medals . . . . 25" (p. 73). "The catalogue published in 1846 is in two parts, paged separately. . . . Part seventh contains a catalogue of works of art, globes, atlases, maps, plans, paintings, engravings, busts, and medals (pages 909–950.)" (pp. 75f).
The Library of the United States Naval Lyceum Brooklyn, N.Y.	1833	"531 coins, 49 medals" (p. 79).
The New York Society Library New York, N.Y.	Apr. 2, 1754	"a small but beautiful collection of bronze medals . . . and one set of Waterloo medals, fifty in number." (pp. 87f).
Library of the New York Historical Society New York, N.Y.	1804	"Medals, about . . . . 200 coins, about . . . . 1,400" (p. 93).
Columbia College Library New York, N.Y.	1757	"a series of bronze medals illustrative of the Elgin marbles" (p. 94).
College Library Burlington, N.J.	1846	"several hundred coins" (p. 105).
Libraries of the College of New Jersey Princeton, N.J.	1755	"a small one [collection] of medals and coins, and has lately received more than 8,000 sulphurets—fac-similes of ancient Roman and other coins" (p. 106).
The Easton Library Easton, Pa.	1811	"a small number of coins"
Pennsylvania College Libraries Gettysburg, Pa.	1832	"about 50 medals, and 400 or 500 coins." (p. 109).
The Library Company and the Loganian Library Philadelphia, Pa.	July 1, 1731	"In 1752, 'a noble present of ancient medals' was received through Mr. Peters from Mr. Gray, member of Parliament for Colchester." (p. 115).

LIBRARY	*FOUNDED*	*REPLY*
		"In October, 1773, several specimens of minerals and 53 curious coins, were presented by Edward Pole. Unfortunately, the secretary, in reporting the gift, was obliged to add the following memorandum: 'but the library being entered by some thief (as supposed) last night, he carried off all the coins and tokens, together with some change which was left in the drawer.' Mr. Pole, however, received the thanks of the directors, and the articles were advertised, but never recovered." (p. 117).
Library of the American Philosophical Society Philadelphia, Pa.	1742	"The society has also an 'extensive collection of manuscripts, maps, charts, and engravings, and, in its cabinet, medals, coins, &c.' The precise number 'cannot readily be given.' " (p. 123).
The Library of the Historical Society Philadelphia, Pa.	1825	"collections of medals and coins." (p. 129).
The Chester County Cabinet of Natural Sciences Westchester, Pa.	Mar. 1826	"a very few engravings and medals, and about 400 coins, (300 copper and 100 silver,), among which are 86 silver and 59 copper coins from 21 different governments, collected during the circumnavigating cruise of the United States ship Peacock, in 1835–'37, by the late Lieutenant Darlington, United States Navy, and presented by him." (pp. 130f).
Baltimore Female College Baltimore, Md.	1850	"a cabinet of ancient and modern coins. Of ancient coins there are more than 500. (See catalogue of the B. F. C. for 1850)." (p. 136).
The Library of Congress Washington, D.C.	Apr. 24, 1800	"a series of medals designed by Denon and executed by order of the French government commemorative of events during the reign of Napoleon . . ." (p. 138).
The Library of the War Department, Washington Washington, D.C.	1832	"all the government medals, (50 or 60 in number,) . . ." (p. 140).

LIBRARY	*FOUNDED*	*REPLY*
The National Institute for the Promotion of Science Washington, D.C.	May 1840	"many medals, coins, &c." (p. 142).
Emory and Henry College Libraries Emory, Washington County, Va.	1839	"63 coins" (p. 144).
The Virginia Historical and Philosophical Society Richmond, Va.	Dec. 29, 1831	"a few medals, coins" (p. 147).
Franklin College Libraries Athens, Georgia	1831	"a medal struck in commemoration of the victory at Saratoga, 3 gold, 94 silver, and 249 copper coins, ancient and modern." (p. 156).
Wesleyan Female College Library Macon, Ga.	Nov. 1837	"a few valuable ancient coins" (p. 157).
The Franklin Society Mobile, Ala.	Jan. 17, 1835	"a few coins" (p. 159).
Oakland College Claiborne County, Miss.	1831	"200 medals and coins" (p. 161).
St. Joseph's College Bardstown, Ky.	1824	"It has also about 400 medals of the 15th' 16th, 17th, and 18th centuries, and about 200 modern coins." (p. 165).
Georgetown College Libraries Georgetown, Ky.	1837	"It has also 64 medals and 676 coins, comprising those of Burmah, Siam, Hindostan' the East India Company, South America' Dutch East Indies, &c." (p. 166).
Ohio Wesleyan University Delaware, Ohio	1845	"curious coins" (p. 171).

APPENDIX VI

Smithsonian Publications of Numismatic Interest, 1860–1907

A Note on the Numismatic Library

Papers of numismatic interest published during the years from 1860 to 1907 in the Smithsonian's *Annual Reports* are listed below in chronological order. In addition, there is a brief account of the condition of the numismatic library in 1888 and in 1925.

MORLOT, A. "General Views on Archeology." Transl. by Philip Harry. Pp. 284–343 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1860* (Washington, 1860). Greek coins are mentioned on pp. 328f and 337 in connection with chronological problems.

POLLOCK, JAMES. "A Brief Account of the Processes Employed in the Assay of Gold and Silver Coins at the Mint of the United States." Pp. 422–428 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1868* (Washington, 1869).

RAU, CHARLES. "Ancient Aboriginal Trade in North America." Pp. 348–394 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1872* (Washington, 1873). Special mention is made of "wampum" (pp. 379–383) and trade in copper (p. 355). This is an enlarged and improved version of a paper first published in German in *Archiv für Anthropologie*, vol. 5 (Braunschweig, 1872).

MASON, OTIS T. "The Leipzig Museum of Ethnology." Pp. 390–410 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1873* (Washington, 1874). Objects of cultural-historical nature are listed in the order of their development. Thus, numismatics appears fairly well defined (pp. 408f): "Money—Coin—Substitutes for coin—Paper money—Certificates of indebtedness—Medals, badges, and other outer decorations."

RAU, CHARLES. "The Stock-in-Trade of an Aboriginal Lapidary." Pp. 291–298 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1877* (Washington, 1878).

MASON, OTIS. "The Ray Collection from Hupa Reservation." Pp. 205–240 in part 1 of the *Annual Report of the Board of Regents of the Smithsonian Institution, 1886* (Washington, 1889). This paper contains a section on "Money and its Uses" (pp. 231–234).

STEARNS, ROBERT E. C. "Ethno-Conchology—A Study of Primitive Money." Pp. 297–334 + 9 plates in part 2 of the *Annual Report of the Board of Regents of the Smithsonian Institution, 1887* (Report of the U.S. National Museum) (Washington, 1889). This paper is still considered basic for the study of shell money.

GOWLAND, W. "The Art of Casting Bronze in Japan." Pp. 609–651 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1894* (Washington, 1896). This paper was first published in the *Journal of the Society of Arts*, no. 2215, vol. 43, May 3, 1895. Gowland discusses the earliest coinage of Japan (p. 614) and gives the analysis of late 17th-century coins based on the average composition of 7,600 pieces melted together (p. 619). In this connection, he mentions the conversion of Buddhist statues into coins during the 15th and 17th centuries. Of particular interest is plate 70 illustrating molding and casting techniques in use at the old mint in Edo around 1835.

WILSON, THOMAS. "The Swastika, the Earliest Known Symbol, and Its Migrations; With Observations on the Migration of Certain Industries in Prehistoric Times." Pp. 757–1011 in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1894* (Washington, 1896). This paper contains a special discussion of the swastika on ancient coins (pp. 871–879, figs. 224–236, and pl. 9).

RHEES, WILLIAM J. *Visitor's Guide to the Smithsonian Institution and U.S. National Museum in Washington, D.C.* (Washington, n.d., ca. 1890). Special emphasis is placed in the guidebook on a tally stick, used by the Court of Exchequer of England, with one full page on the subject (p. 34). See also pp. 33 and 38.

HOFFMAN, WALTER JAMES. "The Graphic Art of the Eskimos." Pp. 749–968 in the *Annual Report of the*

Board of Regents of the Smithsonian Institution, 1895 (Report of the U.S. National Museum) (Washington, 1897). This unusual and rather broadly cast study discusses the coinage of the ancient Britons and ancient trade routes (pp. 818–824 and pls. 46–57).

Adler, Cyrus and Casanowicz, I. M. "Biblical Antiquities: A Description of the Exhibit at the Cotton States International Exposition, Atlanta, 1895." Pp. 943–1023 + 46 plates in the *Annual Report of the Board of Regents of the Smithsonian Institution, 1896* (Report of the U.S. National Museum) (Washington, 1898). This paper contains a special discussion of "A Selection of the Coins of the Bible Lands" (pp. 982–988 and pl. 9).

White, Charles A. "The Archaic Monetary Terms of the United States." *Smithsonian Miscellaneous Collections*, vol. 50, part 1, no. 1714. (Washington, 1907).

Beckwith, Paul Edmond. "Indian Peace Medals; French, Canadian, British, and Medals of the United States." Pp. 829–836 in part 1 of *Handbook of American Indians North of Mexico* (Bureau of American Ethnology Bulletin 30). (Washington: Smithsonian Institution, 1907).

Library

Numismatics as a museum discipline demands a complete reference library. In the early days, however, since the museum had no specialized staff of numismatists, very little was done to build up an adequate library. In the 1880s a beginning was made to obtain various periodicals and 13 numismatic publictions were received in 1888.[143] Unfortunately, this beginning was not pursued as a long-range project for the museum.

In 1925 the numismatic library was substantially increased with the addition of about 800 volumes and pamphlets from the old Philadelphia Mint cabinet.[144] No systematic acquisitions were made, however, and current publications, periodicals, and standard references were acquired only sporadically. Since 1956 an increased flow of books and periodicals has come in, mainly through donations. Although the library still has serious gaps, the Smithsonian numismatic library ranks among the leading specialized libraries in this country.

Appendix VII

Gift of Gold Coins from Japan to President U. S. Grant

A collection of gold and silver coins from Japan was given to President Grant by the Japanese Government "as a slight return for [his] liberality and thoughtfulness in sending to His Imperial Majesty one of [his] blooded horses." The coin collection was presented later to the United States Government by Mrs. Julia Dent Grant and Mr. W. H. Vanderbilt. President Arthur's message to Congress on February 4, 1885,[145] concerning Mrs. Grant's offer to give the Government the testimonials lately belonging to General Grant, contains a schedule of these objects. In this schedule the Japanese collection is mentioned on page 3: "Collection of coin (Japanese). This is the only complete set, except one which is in the Japanese treasury. Seven of these pieces cost $5,000. This set was presented by the Government of Japan." The collection was accepted by a resolution of Congress which became law on August 5, 1886. (Mr. Isao Gunji of the Economic Research Dept. of the Bank of Japan recently expressed the opinion that some of these pieces were made during the 18th century for collectors.)

The only known illustrations of this collection are in William H. Allen's *The American Civil War Book and Grant Album* published in 1894.

The following is a transcription of data from original correspondence on file in the Registrar's office, United States National Museum.

Department of Colonization.
Tokio, Japan December 2. 1880.

Sir:

I have the honor to inform you that His Imperial Majesty, having highly appreciated the swiftness and beauty of the stallion, of your own breeding, which had been kindly presented by you, has ordered me to make use of him for breeding, in order to improve our native horses, and that the stallion has been sent to the Agricultural farm at Narwye in the Province Oohima, in the Island of Gesso, for that purpose. I have no doubt that fine stock will soon follow in abundance.

It affords me great pleasure to present you certain articles mentioned in the enclosed list, as a token of our appreciation of your courtesy, and I shall feel much gratified if you will be pleased to accept them.

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[143] *SI Report*, 1888, pp. 33, 36.

[144] *USNM Report*, 1925, p. 109.

[145] Exec. Doc. No. 60.

Availing myself of this opportunity to express my best wishes for your good health and prosperity,

I have the honor to be, Sir,

Your obt. Servant,
Kuroda Kiyotaka
Minister of Colonization

General U.S. Grant

Legation of Japan
Washington
January 7. 1881.

My Dear Sir:

I have the honor to state that a box has reached the Legation this morning, which contains a small collection of the ancient Coins of Japan, intended as a present for you, from the Department of Colonization, and as a slight return for you liberality and thoughtfulness in sending to His Imperial Majesty one of your blooded horses. It affords me great pleasure to forward the same to your address by Adam's Express today, and to enclose a letter from General Kuroda, together with its translation and a descripton of the coins.

I avail myself of this occasion to present to you and Mrs Grant, the compliments of the season and best wishes.

Very Respectfully and Sincerely yours,
Yoshida Kiyonari

General U.S. Grant

List of Old Coins
Presented to
General U.S. Grant

No. 1. Yudzuriha Ban.
" 2. Higashiyama Hówò Maru Ooban.
" 3. Kiyosu Ooban.
" 4. Kameyama Ooban.
" 5. Yoshi Mame Ban.
" 6. Taiko Fukjuban.
" 7. Tasima Ooban.

Notes.

No. 1. Was made during the reign of the Shogun Ashikaga Yoshimasa in the years Hotok and Kotok—1450–54 A.D.—and it is said that the coins were used as rewards.

No. 2. Was made in the Ginkaku (Silver Palace) at Higashiyama in the Province of Yamashiro, by the Shogun Ashikaga Yoshimasa in the year Bun Mei—1480 A.D.

No. 3. Was made by Udaijin Ota Nobunaga in the year Yeiroku—1559 A.D. when he was the Ruler of Kiyosu in the Province of Owari, and the coins were distributed among his retainers for war-like exploits.

No. 4. Is said to have been made for war purposes by Akechi Mitsuhide the ruler of Kameyama—in the Tenth year of Tensho—1582 A.D.—in the Province of Tanba.

No. 5. Is said to have been made for prizes by Kikkawa Motoharu, the ruler of Idzumo province, in the years Tensho—1570–80 A.D.

No. 6. Is said to have been made by Kwanbaku Foyotomi Hideyoshi in the years Tensho and Keicho—1580–90 A.D. and was used as a high prize.

No. 7. Was made in the Province of Tasima, after the end of the Kiushu war by Kwanbaku Foyotomi Hideyoshi in the 14th and 15th years of Tensho—1586–87—A.D. and was distributed among the soldiers who had distinguished themselves.

Appendix VIII

The United States Mint Collection

The Mint cabinet was officially started in June 1838, but its history goes back to the beginning of the Mint in 1792–1793. The Chief Coiner, Adam Eckfeldt (fig. 12), connected with the Mint since its inception, "led as well by his own taste as by the expectation that a conservatory would some day be established, took pains to preserve master-coins of the different annual issues of the mint, and to retain some of the finest foreign specimens, as they appeared in deposit for recoinage." [146] Among the coins deposited by Adam Eckfeldt was, for instance, the famous Brasher Doubloon (fig. 15). When a special annual appropriation was instituted for this purpose by Congress in 1838, the collection took permanent form and grew continuously.

The eagerness of the Mint assayers William E. Du Bois (fig. 13) and Jacob R. Eckfeldt to complete the Mint collection contributed to its continued growth. Du Bois in his *Pledges of History* (1846, second edition 1851) mentions that after the collection was officially established in June 1838, it "has gone on in a continual augmentation . . . specimens of new coinage, domestic or foreign, must be added as they appear." In the same volume Du Bois also describes the early Mint exhibit, located at that time at 17th and Spring Gardens Streets in Philadelphia.

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[146] William E. Du Bois, *Pledges of History. A Brief Account of the Collection of Coins Belonging to the Mint of the United States, More Particularly the Antique Specimens*, Philadelphia, 1846, pp. 6f. A "Second edition, with additions" appeared as an appendix to Jacob R. Eckfeldt and William E. Du Bois, *New Varieties of Gold and Silver Coins . . .* New York, 1851. See there the passage quoted by us, pp. 29f. It was reprinted under the title "Collection of Specimen Coins at the Mint, Philadelphia" in *The Numismatist* (1937), vol. 50, pp. 101f.

> The suite of apartments in the Mint, appropriated to the exhibition of coins, ores, and national medals, occupies the front of the building in the second story, and measures sixteen feet wide by fifty-four feet long. Originally there were three rooms, connecting with each other by folding-doors; the removal of these has made one large saloon, with recesses, very commodious and suitable for the use to which it is applied. The eastern and western rooms are of uniform size and construction; the central one has a dome and skylight, supported by four columns; with a corresponding window in its floor (protected by a railing) to light the hall of entrance below.
>
> The ancient coins are displayed in eight cases, mitred in pairs, and placed erect against the walls in the wide doorways and the middle room. The modern coins are variously arranged; part (including all those of the United States) being in a nearly level case which surrounds the railing above mentioned; and part being in upright cases, disposed along the walls of the middle and west rooms. The ores, minerals, and metallic alloys, are placed in the west room; in the eastern are shown the national and other medals, and the fine beams used for the adjustment of weights. All the cases are fronted with glass, and besides allowing an inspection of every specimen, present an agreeable coup d'oeil on entering the room, especially by the middle door.
>
> Visitors are admitted in prescribed hours, if attended by an officer or conductor of the institution.

Data about the growth of the Philadelphia Mint collection may be gleaned from Mint records preserved in the National Archives as well as from occasional published notes and reports. Some early illustrations of coins from the cabinet are contained in Jacob R. Eckfeldt and William E. Du Bois' *A Manual of Gold and Silver Coins of All Nations, Struck Within the Past Century* (Philadelphia, 1842). The illustrations of coins were executed by the medal-ruling machine invented by Christian Gobrecht and perfected by Joseph Saxton. The volume has 16 plates, but not all coins illustrated are from the Mint cabinet. The first full catalogue of the collection appeared in 1860 under the direction of James Ross Snowden. Entitled *A Description of Ancient and Modern-Coins, in the Cabinet Collection at the Mint of the United States* (Philadelphia, 1860), it was prepared by George Bull, in charge of the cabinet, with the advice and assistance of Du Bois, at that time assistant assayer and curator of the cabinet. In 1861 Snowden published *the Medallic Memorials of Washington in the Mint of the United States.* He was very much interested in this particular section of the cabinet and made every effort to enlarge it.

Notes about additions to the collections were published by W. E. Du Bois in "The United States Mint Cabinet," [147] where he mentions that "the whole number of coins and medals at this time [1874] is 6,484," and in "Recent Additions to the Mint Cabinet." [148] Reports in later years were given by Patterson Du Bois.[149] A design by D. A. Schuler (fig. 9) dated 1885 and published in A. M. Smith's *Visitor's Guide and History of the United States Mint, Philadelphia, Pa.* gives a view of the exhibits of that period.[150] In connection with Du Bois' earlier description, it renders a general idea of the numismatic displays at the Mint during the 19th century. In 1891, R. A. McClure, curator of the Mint collection, prepared *An Index to the Coins and Medals of the Cabinet of the Mint of the United States at Philadelphia*, published by the Superintendent of the Mint, O. C. Bobyshell; and in 1894 the *Philadelphia Telegraph* reported on "Late Additions" to the Mint cabinet: "8,000 coins were on display, the case of current coins stands to the left of the museum door, opposite the Curator's desk." [151]

With the completion of a new mint in Philadelphia in 1902, described as "the finest building ever constructed for coinage purposes in the world," the cabinet was moved to the new location. It was reinstalled there in sumptuous surroundings and in new, rather ponderous exhibit cases. An illustration (fig. 10) in the Director's report shows a picture of the new displays.[152]

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[147] *American Journal of Numismatics* (1874), vol. 8, p. 65.

[148] Ibid. (1877), vol 11, pp. 86–88.

[149] "Compte Rendu," ibid. (1884), vol. 18, pp. 89–91; "Hog Money, etc.," ibid. (1885), vol. 19, pp. 66f.

[150] Reprinted from *New Varieties of Gold and Silver Coins* by Jacob R. Eckfeldt and William E. Du Bois (Assayers of the Mint, 1851), New York, 1851, p. 29.

[151] Reprinted in *The Numismatist* (1894), vol. 7, pp. 158–162.

[152] *Annual Report of the Director of the Mint . . .* 1902, Washington, 1902, plate at p. 76.

The first and only formally recognized curator of the Mint collection was Dr. Thomas Louis Comparette appointed to the post in 1905.[153] (Various other people had been delegated to take care of the Cabinet but without the title curator.) Comparette immediately made plans for expansion and improvement of the Mint collection. "The most pressing needs appear to be a new catalogue and a rearrangement of the coins in the cases," according to his comprehensive report about the numismatic collection.[154] In the same report he mentions, referring to the past, "An apparent tendency to give undue preference to rather expensive rarities for exhibitions as 'show pieces' has resulted in restricting the numerical development of the collection, in the increase of certain series at the expense of others, and especially in the neglect of the coins of lower denomination, which are much less attractive to the average visitor but necessary in order to gain a proper idea of the complete coinage of a given country or period and highly valued by the better informed. The more serious purpose better harmonizes with what is felt to be the worthier function of the collection, for the attitude of the cabinet has been from the first that of an educational institution."[155]

The preparation of the catlogue took Comparette about seven years; it appeared in 1912 comprising 634 pages and 15 plates. In 1914 a so-called "third edition" followed with the same number of plates but expanded through additions to 694 pages.[156] A most useful 106-page *Guide to the Numismatic Collection of the Mint of The United States at Philadelphia, Pa.* was published in 1913. In addition to the catalogue Dr. Comparette published various papers, particularly in the field of ancient numismatics.[157]

While in charge of the Mint cabinet Comparette expended considerable time and effort to mobilize support for the improvement of the collection. He attempted to obtain the support of President Theodore Roosevelt to secure for the cabinet the H. C. Hoskier collection of Greek and Roman coins when the owners who lived in South Orange, New Jersey, offered it for sale.[158] Comparette succeeded in obtaining the support of the Assay Commission of 1909: Their committee on resolutions passed a motion recommending that the coin collection be improved and suggested the striking of artistic medals with the understanding that the profits from their sale should benefit the Mint collection.[159] Similar resolutions were passed by the annual Assay Commissions meeting in subsequent years.[160]

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[153] Born in Dekalb County, Indiana, in 1868, Comparette was educated at the University of Wooster, Ohio. He continued his studies at the Universities of Michigan, Chicago, finally Halle and Berlin. Comparette became also a member of the American School of Antiquities, Rome. From 1893 to 1897 he was professor of Greek and Latin at the Texas Christian University at Waco, Texas, then served as assistant in Latin at the University of Missouri until 1905. For further information, see *The Numismatist* (1922), vol. 35, pp. 377f.

[154] "Numismatic Collection," pp. 65–75 in the *Annual Report of the Director of the Mint . . .* 1905. Reprinted under the title "On the Utility of a Cabinet of Historic Coins" in *The Numismatist* (1906), vol. 19, pp. 78–79, 103–111, 146.

[155] *Annual Report of the Director of the Mint . . .* 1905, p. 65; *The Numismatist* (1906) vol. 19, p. 78.

[156] *Catalogue of Coins, Tokens, and Medals in the Numismatic Collection of the Mint of the United States at Philadelphia, Pa.*, Washington, 1912; "3rd edition," 1914.

[157] Thomas Louis Comparette: "Inaccurate Tables of Roman Coins in American Latin Grammars," *American Journal of Numismatics* (1912), vol. 46, pp. 125–129; "Debasement of the Silver Coinage under the Emperor Nero," *American Journal of Numismatics* (1913) (New York, 1914), vol. 47, pp. 131–141; "Aes signatum," *American Journal of Numismatics* (1918) (New York, 1919), vol. 52, pp. 1–61, pls. 1–8; "The Decadrachms of Syracuse," *The Numismatist* (1913), vol. 26, pp. 57–64; "The First United States Mint," *The Numismatist* (1910), vol. 23, pp. 2–5, 39–42; " 'La Risposta'—'Territorial' vs 'Private,' " *The Numismatist* (1910), vol. 23, pp. 9–10; "Society, not State, Introduced Coinage," *The Numismatist* (1910), vol. 23, pp. 43–45; "A Brief Study of the Medal, its Origin and Early Development," *The Numismatic and Antiquarian Society of Philadelphia, Proceedings* (1907–1909), pp. 91–113; "Coins and Medals in the United States in 1913," *American Journal of Numismatics* (1913) (New York, 1914), vol. 47, pp. 142–158, pls. 7–12; "Medals Engraved in the United States of America in the Year 1914," *American Journal of Numismatics* (1914) (New York, 1915), vol. 48, pp. 205–218, pls. 27–31; "Coins and Medals Engraved in the United States of America in the Year 1915," *American Journal of Numismatics* (1915) (New York, 1916), vol. 49, pp. 199–209, pls. 23–27.

[158] His efforts were, however, in vain: The Hoskier Collection was sold on auction by Dr. Jacob Hirsch in Munich in 1907; see the latter's catalogue no. XX.

[159] Reported under the title "For the Improvement of the National Coin Collection" in *The Numismatist* (1909), vol. 22, pp. 144f. Chairman of the Committee on Resolutions was the well-known numismatist Farran Zerbe, members were Ambrose Swazey, Dr. William Sturgis Bigelow, and others. The resolution was supported by the Director of the Mint, Frank A. Leach, the Chief of the Secret Service, John E. Wilkie, and Congressman Ira W. Wood.

[160] "The Annual Assay Commission. Recommendation for the Support of the Mint Cabinet," *The Numismatist* (1910), vol. 23, pp. 179f; *Proceedings of the Assay Commission of 1912 . . .* pp. 17f.; *Annual Report of the Director of the Mint . . . 1915*, p. 56; op. cit., 1916, p. 42; op. cit. 1917, p. 27; op. cit., 1918, p. 38.

Reports about the growth of the collection were incorporated in the Director's *Annual Report* from 1910 through 1921 under the title "The State of the Numismatic Collection" (after 1917, "The Progress of the Numismatic Collection").[161] All these activities ended with Dr. Comparette's sudden death on July 3, 1922.

The idea of the transfer of the collection to Washington had been proposed as early as 1916 by Dr. George F. Kunz of New York, President of the American Scenic and Historic Preservation Society and one of the most active members of the American Numismatic Society. He discussed the idea with Dr. Charles D. Walcott, Secretary of the Smithsonian, and with the Director of the Mint, Robert W. Wooley, on April 4, 1916. The following documents trace the transfer of the Mint Collection to the Smithsonian Institution.

New York City,
April 6, 1916.
401 5th Avenue.

Hon. Robert W. Woolley,
Director of the Mint,
Washington, D.C.

Dear Mr. Woolley:

Appropos of our conversation of Tuesday, I am now writing the following letter:

In view of the fact that in a number of foreign countries, a great national collection of coins is in the National Museum and in the national capital, it occurred to me that if the United States Government transferred the majority of the coins from the Mint in Philadelphia to the United States National Museum and had it distinctly known that a great national collection was being formed there, it would undoubtedly be enriched by gifts and legacies from time to time. The Curator in charge could be transferred from the Mint to the National Museum.

The collection there would be more accessible to the Director of the Mint and, undoubtedly, would be of considerable value to him; the collection at present is more or less inaccessible. A greater number of visitors would see it at the National Museum and the study of coins and coinage, which has had great bearing upon Art in history, would be materially advanced.

I had the pleasure of dining with Director Walcott of the United States National Museum on Tuesday, the 4th, and spoke to him of the possibility of a coin collection at the Museum. I think that he seemed interested.

There are a number of large collections of coins in the United States and with the example of Mr. Freer giving paintings, there may be something doing in the coin line.

Believe me,

Very truly yours,
George F. Kunz

The lack of a curator after the death of Dr. Comparette and the closing of the Mint to the public because of a robbery at the Denver Mint (committed after thieves obtained information through a previous visit) were among the factors that persuaded the Secretary of the Treasury, Andrew W. Mellon, to decide to transfer the collection to the National Museum in Washington, and he so notified Secretary Walcott:

Washington
February 8, 1923.

Hon. Charles D. Walcott,
Secretary, Smithsonian Institution
Washington, D.C.

My dear Dr. Walcott:

It has recently been deemed advisable in the interest of safety to close the United States Mints to visitors. As you are aware, there is a large numismatic collection in the Mint at Philadelphia. Since the Mint is to be permanently closed to visitors the inspection of the collection by the public is no longer possible. There is an important and very beautiful selection of coins, tokens and medals, perhaps the largest and most complete numismatic collection owned by the Government. The logical place for this collection would seem to be in the National Museum in Washington, and I am writing to ask if you would consider it feasible to have the collection transferred there. In case you consider the undertaking favorably may I suggest that you designate a representative of the National Museum to inspect the collection in order that you may be advised as to its scope and importance, and as to other details involved in the proposed transfer.

The Curator of the Mint at Philadelphia died several months ago, but we have made no special effort to fill the position for the reason that the removal of the collection to Washington has been tentatively considered for some time.

The collection is under the jurisdiction of the Director of the Mint, and I shall be glad to instruct that officer to place before you all available information in regard to it. I am enclosing a Catalogue of the coins, tokens and medals which may be of interest to you in considering the proposed transfer of the collection for the Mint to the National Museum.

Very truly yours,
A. W. Mellon
Secretary of the Treasury.

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[161] *Annual Report of the Director of the Mint . . . 1911*, pp. 19f.; op. cit., 1912, p. 18; op. cit., 1913, pp. 23f.; op. cit., 1914, pp. 28f.; op. cit., 1915, pp. 29f,; op cit., 1916, p. 24; op. cit., 1917, p. 34 ("The Progress of the Numismatic Collection"); op. cit., 1918, p. 33; op. cit., 1919, p. 33; op. cit., 1920, p. 42; op. cit., 1921, pp. 33f.

The Secretary of the Smithsonian acknowledged Andrew Mellon's letter on February 12 and delegated Mr. W. de C. Ravenel, Director of the Museum, and T. T. Belote, curator of history, to discuss the necessary arrangements for the transfer.

My dear Mr. Mellon:—

I beg to acknowledge the receipt of your letter of February 8, concerning the transfer to the United States National Museum of the numismatic collection at present in the Philadelphia Mint, and to assure you of my deepest interest in the safeguarding and exhibition for the benefit of the public of this exceptionally important and valuable collection. The addition of the material to the collection of the same character already in the custody of the Museum would render available to those interested in the science of Numismatics an exhibition collection comparable to those shown in the other great museums of the world which have recognized the importance of this subject. As a part of the collections already in the National Museum representing the more general subject of History, with which Numismatics is closely allied, the material from Philadelphia when installed in the Museum would be seen by the thousands of visitors annually from all over the United States who are attracted to the Museum by the variety and scientific and popular importance of its exhibits.

In accordance with your suggestion, therefore, it will give me much pleasure to authorize Mr. W. de C. Ravenel, the Director of the Museum, and Mr. T. T. Belote, Curator of History, who is thoroughly experienced in numismatic work to inspect the collection and confer with the proper officials of your Department regarding the transfer.

Very truly yours,
Charles D. Walcott
Secretary.

The Honorable A. W. Mellon,
Secretary of the Treasury
Washington, D.C.

Formal acceptance of the collection by the Secretary of the Smithsonian Institution followed on February 19:

My dear Mr. Mellon:—

Referring to my letter of February 12, concerning the numismatic collection now in the Philadelphia Mint, as to the conference between Miss O'Reilly, Acting Director of the Mint, and Mr. T. T. Belote of the Museum staff, I now take pleasure in advising you that the National Museum is very glad to accept this splendid collection and will be pleased to receive it whenever it is convenient for the officials of the Mint to have it packed and forwarded.

A representative of the Museum will visit Philadelphia to inspect the cases in which the collection is now installed with a view to determining whether they will be serviceable to the Museum.

In this connection I wish to assure you of my appreciation of your thoughtful interest in making such an important contribution to the national collections.

Very truly yours,
C. D. Walcott
Secretary.

The Honorable A. W. Mellon,
Secretary of the Treasury,
Washington, D.C.

On February 28, Theodore T. Belote was authorized to inspect the numismatic collection at the Mint in order to plan for its packing and transportation to the National Museum. He spent March 6 and 7 there and reported on March 8 to Miss M. M. O'Reilly, acting director of the Mint, his findings and recommendations. The following passages are of interest: "the collection . . . was partly in exhibition cases and partly in wooden cabinets in the office of the curator. The entire collection was counted by the lady in charge, Miss Anna Tibbles, and myself with the exception of a collection of United States war service badges, which Miss Tibbles informed me had already been completely listed, and a large amount of European emergency currency of comparative small intrinsic value.

"The specimens in the exhibition cases were counted by case and country and two copies of the list were made one of which was entrusted to Miss Tibbles and one retained by myself. The specimens in the storage cabinets were counted by trays."

He suggested that the coins "be placed in envelopes of suitable size with the small lables which they now bear, then grouped in boxes of strong paper, about twelve by twelve by fourteen inches in size, and finally inclosed in a series of stout wooden boxes of convenient size for shipping such heavy material by express. The medals which are not so liable to injury in transit as the coins may be placed in envelopes of a good quality and packed directly in wooden boxes for shipment. Copies of those sections of the lists prepared by Miss Tibbles and myself referring to the contents of the various boxes may be packed with the coins to which they refer."

On the same date, Theodore T. Belote, forwarding to Ravenel his report to Miss O'Reilly, made some additional remarks that should be quoted here:

I found that the size and importance of the collection has been very materially increased since my last visit to the Mint in Philadelphia and that the acceptance of this collection will place the National Museum in the front

> rank of the museums of the world so far as the science of numismatics is concerned. . . .
>
> In this connection special attention should be given to the offer of the Treasury Department to transfer to the Museum the exhibition cases in which the collection is now contained. These cases were specially designed for numismatic material and are the safest of any types of such cases I have ever seen. The woodwork is heavy mahogany, the glass is a fine quality of heavy plate, and each case is furnished with a unique double locking device which renders it apparently as safe as it is possible to construct such a case. The cases are at present arranged against the walls of an octagonal room or rotunda and are of three sizes all of the same general type. They consist of the following:
>
> Twelve wall cases each six feet long;
>
> Fourteen cases, each four feet long, built tangent to a circle; and fourteen cases, each two feet long, built on the interior of the circle.
>
> All these are about six feet high with an upright portion against the wall and a horizontal section extending out from the wall each of these portions giving an exhibition space of about twenty-four inches extending the length of the case. The interiors of these cases are arranged for the exhibition of numismatic material in an artistic and serviceable manner.
>
> In addition to the cases described above the office of the former curator of the collection in the Mint contains two oak cabinets with combination locks and shallow trays for coins. The smaller of these two cabinets is 24″ x 36″ x 48″; the larger is 24″ x 52″ [? illegible] x 72″. They would afford space for the coins of lesser value during the period when they were not on exhibition and could not be duplicated now by any cabinet maker for less than thousands of dollars.
>
> The office of the curator also contains two large oak book cases containing a number of very rare and expensive works on the subject of numismatics . . . which are now offered to us with the collection of coins and medals. . . . These should certainly be accepted as they will be priceless aids to the arrangement of the collection in the National Museum.
>
> The fact that the transfer of this collection to Washington will mean the shifting of the numismatic center of gravity, so to speak, in the United States from Philadelphia to Washington, is very keenly felt by the higher officials of the Mint . . . who seem to be all Philadelphians . . . and they did not hesitate to express to me their distinct opposition to this action on the part of the Treasury Department and some of them even went so far as to hint that a propaganda would be initiated to have the process reversed.

Pressure did indeed build up in Philadelphia against the proposed transfer. The *Philadelphia Ledger* of March 31 expressed great concern "that the Philadelphia Mint's invaluable collections of coins, medals and tokens is being boxed, ready for shipment to the National Museum in Washington. The collection which was begun with the inception of the Philadelphia Mint in 1792, is believed to be one of the finest in the world." Another editorial on the same subject appeared in the Ledger on April 1.[162]

Various local organizations, and through them congressmen from the area, were mobilized in an intensive but futile action to reverse the Treasury Department's decision, which was enunciated in a press release:

> Tuesday, April 3, 1923
>
> The Secretary of the Treasury announces that he has approved the recommendations of the Director of the Mint for the transfer of the collection of coins, tokens and medals in the Mint at Philadelphia to the National Museum at Washington. This is a national collection, and therefore most appropriate for exhibition in the National Museum, where it will be open to a larger public than at the Mint. All of the Mints, moreover, are now closed permanently to visitors, and if kept at the Philadelphia Mint the collection would have been inaccessible to the public.

This press release could hardly calm the local resentment and the pressure groups. On a national level, however, the American Numismatic Association immediately supported the transfer. In an editorial comment which appeared in the May 1923 issue of *The Numismatist*,[163] this position was made very clear:

> Taking a broad view of the matter, the National Museum in Washington is the logical place for the coin collection. It has been termed the Mint collection, though, strictly speaking, it is the national collection. The National Museum already has a collection of medals, and the merging of the two collections will be advantageous.
>
> The construction of the Mint Cabinet is such that it would be impossible to enlarge the space for the collection without remodeling the entire rotunda. This fact would prevent the material growth of the collection. . . . In the National Museum more space will probably be available, and perhaps more money for the purchase of additional specimens can be obtained.
>
> Washington is the home of our other national collections. . . . The Capital City is a Mecca for sightseers and visitors, and the other collections will help to attract a larger number of visitors than a collection of coins alone could command.
>
> There is one phase of the matter that is worthy of reflection, but which may not have received consideration by the Treasury officials in reaching their decision. The late

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[162] See, *The Numismatist* (1923), vol. 36, pp. 198f.

[163] Vol. 36, pp. 202f.

> Dr. Comparette . . . is said to have been greatly concerned . . . about the apparent deterioration of the condition of the coins in the collection. The cause of this . . . was believed to be due to an atmospheric condition. . . . on The Mall in Washington, all such conditions will be removed.

The editorial concludes that the closing of the mints to visitors "is to be regretted more than the transfer of the collection from one city to another."

Concerned about the protests from Philadelphia, which multiplied during the month of April, Belote tried to obtain the active support of the national numismatic organizations.

He visited New York where he had a series of meetings on May 7 and 8 with Edward T. Newell, President of the American Numismatic Society, Moritz Wormser, President of the American Numismatic Association, and Howland Wood, Curator of the American Numismatic Society's collections. He obtained assurances that efforts would be made to have resolutions passed by the executive bodies of the two societies for presentation to the Secretary of the Treasury recommending the proposed transfer without delay.

As a result of these conferences, the Council of the American Numismatic Society passed a resolution favoring the transfer of the Mint collection to the Smithsonian, and on May 15 a letter to that effect was sent to the Secretary of the Treasury [164] Howland Wood reported to Belote that: "Our Council passed a Resolution to write to Secretary Mellon favoring the transfer of the Mint collection to Washington, and a letter was sent to that effect on Saturday last. Also, the N.Y. Numismatic Club on Friday evening passed a similar Resolution. It looks now fairly favorable for the National Museum's getting it."

Similar action was taken by the New York Numismatic Club upon motion brought by Moritz Wormser at its May meeting. After obtaining the unanimous support of the board of governors of the American Numismatic Association as well, Wormser wrote on May 14 to Andrew Mellon:

> Our Association has noted, with great interest, newspaper reports stating that the Coin Collection, heretofore on exhition to the public and in charge of your Department at the Philadelphia Mint, is about to be transferred to the custody of the National Museum in Washington.
>
> Needless to say, our Association is vitally interested in this collection, and its ultimate disposition, and we believe that if transferred to the National Museum, the Collection will serve a far greater usefulness than at the Philadelphia Mint. We are convinced that at the National Museum in Washington, it would be used to the best advantage for scientific and educational purposes, co-ordinated with the splendid Collections in other branches of art and science which are there displayed, that it could form the nucleus of a large national collection, properly housed, displayed, accessible at all times to a wider public from all parts of our Country, indexed and ultimately increased by proper appropriation to a size in keeping with its importance and with collections owned by other Governments less wealthy and powerful than ours.
>
> Our Association, through the proper action of our Board of Governors, begs to go on record as heartily in favor of the proposed transfer of the Collection to the National Museum and we hope and earnestly urge that your Department will effect the transfer of the Collection to the National Museum, as indicated in these newspaper reports.

In short sequence, Secretary Walcott informed Mellon on May 16 that "the National Museum has entirely perfected its plans for the acceptance and appropriate installation of the numismatic collection from the United States Mint" and asked whether the Secretary of the Treasury could advise him "of the exact time when the transfer . . . will be completed." [165] Actually, all arrangements for the transportation of the collection were completed without further delay, and on May 28, Ravenel was informed that:

> At the request of the Director of the Mint, we are sending to you today 23 cases containing the numismatic collection of this Mint.
>
> I am enclosing herewith receipts prepared in triplicate which I would thank you to sign, returning to me the original and duplicate copies.
>
> There are some changes in the numbers as found by your representative due to miscount in a few instances and additional coins that he did not see, discovered by us when all cases were emptied. As noted in the receipt, we have returned to Joseph K. Davidson's Sons medals loaned by them to the Mint, demand for which was made by them.
>
> Respectfully
> M. H. Chaffin
> Superintendent,
> Treasury Department

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[164] H. Wood's communication to T. T. Belote of May 15. Letter in United States National Museum file No. 70 139. This file has been recently consolidated to contain all pertinent information on the Mint collection transfer.

[165] Carbon copy in USNM file No. 70 139.

The shipment went forward by registered mail, insured and accompanied by Secret Service men. It arrived at the Smithsonian the next morning. It was formally "accessioned" as a transfer on June 13 under number 70 139. Below is a copy of the detailed receipt signed by W. de C. Ravenel.

Received from Freas Styer, Superintendent of United States Mint, Philadelphia, Pa., United States and foreign coins and medals enumerated hereunder by cases, sections, countries and numbers as determined by count made by representatives of the Mint and the National Museum, at the Mint at Philadelphia, Pa., with exception of medals returned to Joseph K. Davidson's Sons owners of certain medals loaned to the Mint and additional coins stored in cases not noted at the time the count was made, as well as some few changes in number of coins contained in certain sections ascertained on recount before packing.

Box	*Section*		*Kinds*	*No.*	*Taken out*
No. 1	Case 24	Upper	U.S. Tokens & Patterns	291	
			California Gold	73	
		Lower	Colonies	103	
			United States Coins	136	
	Case 25	Upper	" " "	395	
		Lower	" " "	255	
	Case 26	Lower	" " "	230	
		Lower	U.S. Commemorative Coins	35	
No. 2	Case 26	Upper	U.S. Coins	342	
No. 3	Box 1 in Office		Coins	251	
	2 " "		Civil War Tokens	470	
	Small Cabinet		Counterfeits	30	
	" "		Medals	189	11*
	" "		Tokens	722	
	Curator's Desk		Gold & Silver coins	24	
No. 4	Case 4	Upper	Great Britain	195	
		Lower	" "	167	
	Case 5	Upper	France	127	
		Lower	"	126	
	Case 6	Upper	Italy	154	
		Lower	"	128	
	Case 7	Upper	Portugal	88	
		Lower	Spain	140	
No. 5	Case 10	Upper	Germany	124	
		Lower	"	49	
	Case 8	Upper	"	135	
		Lower	"	149	
	Case 9	Upper	"	128	
		Lower	"	109	
	Case 11	Upper	"	178	
		Lower	Austria Hungary	174	
No. 6	Case 12	Upper	Denmark	187	
		Lower	Sweden	107	
			Plate Money	4	
	Case 13	Upper	Netherlands	147	
		Lower	Belgium	87	

Box	*Section*	*Kinds*	*No.*	*Taken out*
	Case 14 Upper	Switzerland	142	
	Lower	Minor States of So. Europe	85	
	Case 15 Upper	Poland	129	
	Lower	Russia	168	
No. 7	Case 16 Upper	Africa	95	
	Lower	“	68	
	Case 17 Upper	Canada	104	
	Case 22 Upper	South America	369	
	Lower	“ “	138	
	Case 23 Upper	“ “	261	
	Case 21 Upper	Mexico	287	
	Lower	Central America	248	
No. 8	Case 18 Upper	Turkish & Persian	273	
	Lower	India, Ceylon & Siam	195	
	Case 19 Upper	China	474	
	Lower	“	206	
		String	1	
	Case 20 Upper	Japan	119	
	Lower	Philippine, etc.	115	
	Case 23 Lower	South America	217	
No. 9	Case 1 Upper	Greek	265	
	Lower	“	210	
	Case 2 Upper	Roman Rep.	414	
	Lower	“ Imp.	244	
	Case 3 Upper	“ “	301	
	Lower	“ Byzantine	160	
No. 10	Case 37 Upper	Medals	20	
	Lower	“	32	
	Case 38 Upper	“	28	
	Lower	“	57	
	Case 39 Upper	“	16	
	Lower	“	23	
	Case 40 Upper	“	61	
	Lower	“	38	
	Case 27 Lower	Italian	12	
No. 11	Case 33 Lower	Medals	8	
	Case 34 Upper	“	35	
	Lower	“	16	
	Case 35 Upper	“	10	
	Lower	“	19	
	Case 36 Upper	“	22	
	Lower	“	26	
No. 12	Case 32 Upper	“	20	
	Lower	“	12	
	Case 33 Upper	“	35	

Box	*Section*	*Kinds*	*No.*	*Taken out*
	Case 30 Upper	"	29	
	Lower	"	13	
	Case 31 Upper	"	34	
	Lower	"	7	
No. 13	Case 28 Upper	"	104	
	Lower	"	13	
	Case 29 Upper	"	57	
	Lower	"	19	
	Wall Frame #1	Benjamin Franklin, etc.	4	
No. 14	Wall Frame #2	Decorations	22	1*
	" " #3	French Decorations	12	
	" " #4	U.S. Decorations	37	
No. 15	Small Cabinet	Medals	321	11*
No. 16	Small Cabinet	Medals	406	
No. 17	Large Cabinet A	Medals	346	
	" " B	"	318	
	" " "	"	437	
	" " 1st ½	Target medals	14	
		Decorations	4	
		Medals	5	
		Oak Leaves	2	
		Ribbons	8	
No. 18	Large Cabinet	Medals	146	
	1 Frame	Jap. Gold & silver coins	37	
No. 19	Large Cabinet 2d ½ A	Medals	765	
	" " " "	"	287	
	" " " " B	"	171	
No. 20	Large Cabinet 2d ½ B	Medals	1026	
	" " " " "	"	365	
No. 21	Large Cabinet 3d ½ B	Medals	48	
	" " " " "	War Money		
	" " " " "	Medals	20	
	" " " " "	Decorations	14	
	Tray	Notes of Defunct Banks and Confederate States.		
No. 22	Large Cabinet 2d ½ A	War Badges	319	
	Tray 70	Civil War Tokens	798	
		Surplus Coins & Medals	72	
No. 23	Wall Frame #1	Ben Franklin, etc.	3	
		plaques, miscellaneous	14	
	Case 27 Upper	Friends of the Medallion		32*
	Case 17 Lower	Dies (Held at the Mint)		7*

*Taken out to return to Joseph K. Davidson's Sons by whom they were loaned.

The total number of specimens in the United States Mint collection transferred to the Museum was 18,324. The unpacking of the collection started on November 26, 1923, and the first case opened contained, according to Mr. Belote's report on file, United States gold and silver coins of the late 19th century. The unpacking and checking of all 23 cases was finished on January 21, 1924.

In addition to the numismatic material, the Mint transferred all numismatic books which were selected by Mr. Belote from the specialized library at the Philadelphia Mint on October 8, 1924. A total of 814 publications were transferred to the Museum in December 1924.

APPENDIX IX

The Paul A. Straub Collection

The most important addition to the national numismatic collections came during the period of 1923 to 1952 from Paul A. Straub of New York (fig. 70). On May 13, 1949, Mr. Straub, accompanied by his friend, Henry Grunthal, delivered to Stuart Mosher, associate curator of the Division of Numismatics, and Charles Carey, acting head curator of the Department of History, his magnificent collection consisting of 1,793 gold and 3,855 silver coins.

Paul A. Straub was born on March 19, 1865, in the city of New York. He was associated with several china and glass importing firms. From 1895 to 1915 he resided in Dresden, Saxony, as European representative of one firm. Returned home, he established in New York in 1915 the firm of Paul A. Straub & Company, which became one of the leading importers of china and glassware.

When asked how he became a coin collector, he told the following story:[166]

> I became interested in coins in 1930 while in Dresden on a business trip with some friends.
>
> Coming from a display of relics of the Reformation, shown in connection with the celebration of the Fourth Centennial of the Augsburg Confession, we passed the windows of a coin dealer who displayed a couple of 10-ducat pieces of 1630 commemorating the First Centennial.
>
> We stepped in to see whether he had any United States gold dollars. He did, and my friends bought a few at 7 marks, or $1.75 each. On our way out, the dealer tried to sell me the 10-ducat pieces. Quite surprised at his proposition, I told him that I did not want them, and knew no one who might care to have them. Then I left, but the ducats had made an impression on me, for after lunch I confessed to my friends that I would like to go back to the coin shop. We went—and I left with the 10-ducat pieces in my pocket. I was a coin collector and have been one ever since.

His collection increased rapidly. As early as June 12, 1939, Moritz Wormser, who had shown so much interest in the transfer of the United States Mint collection to Washington, wrote to Theodore T. Belote, curator of the Division of History, mentioning Mr. Straub's desire to find a permanent home for his collection at the Smithsonian. Wormser wrote:

> This time I think I have for you a communication of great interest to yourself and to the Smithsonian.
>
> A very good friend of mine has discussed with me the thought that he might wish to bequeath his coin collection to the Smithsonian. This gentleman is a very fine collector and owns a really magnificent collection especially strong in the foreign field. I have had the privilege of seeing some of his collection, during a five hour visit, when I could see only about half of what he had and he has a wonderful series, especially Germans and gold coins. What I have seen is really too vast to mention in detail; but just to mention one item, he has a complete set of the Guinea series, from the ½ Guinea to the 5 Guinea pieces of every British Ruler, from Charles II to Queen Victoria, excepting of course the excessively rare George III. That was just one of the items that hits you in the eye when looking over the collection. While I made no detail appraisal of the collection, I should think it represents a money value of about $25,000.00 to $30,000.00.
>
> As usual there is of course one string tied to his ideas of bequest: He has been down to the Smithsonian and he does not like the way the collection there is displayed; and he wants some assurance and understanding that his collection would be displayed to better advantage, in some special arrangement of tiers, and perhaps behind shatter proof glass.
>
> As I had read that the Government was going in for so much W.P.A. work, I think that the building and installation of such display facilities should be readily undertaken by the Government.
>
> At the present moment the gentleman is leaving on an extended vacation and will not be back until early in August.
>
> However, I wanted to write you about this while my talk with the collector is fresh in my mind, and you might write to me at your leisure your reaction to this idea, and give some thought how it could be worked out with your Museum.

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[166] See *The Smithsonian Torch* (December 1956), p. 9., about Straub's visit to the museum in November 1956.

> The gentleman is a well established business man, with no immediate heirs, so that I am convinced that his ideas are serious and not just "pipe dreams."
>
> The acquisition of this collection by the Smithsonian, would I believe, give you a really outstanding coin collection.
>
> Let me hear from you at your convenience.
>
> Of course when my friend gets back from his trip and when you get to New York after that time, I shall of course be glad to introduce you to him.[167]

About July 20, 1939, Belote visited with Wormser, who arranged for a meeting with Paul Straub in March 1940. The delay was occasioned, in part, by Straub's extended trip to Europe. Following the meeting, Straub wrote on March 28, 1940, to Dr. Charles G. Abbot, Secretary of the Smithsonian Institution:

> I have been collecting coins for a number of years, and have somehwere between five and six thousand pieces at present, and of these about 1200 pieces are of gold.
>
> It is a general collection of types, and covers the Americas and Europe from about 1500. Over ninety-five percent of the pieces are extremely fine or better.
>
> I would like to give this collection to the Institute [sic] if it can arrange to show it, as I think it should be shown, and if the necessary protection can be given it,—safety glass, etc.
>
> As to the collection itself, I would refer you to Mr. M. Wormser, 95 Fifth Avenue, New York, N.Y., whom you may know and who has seen it. Would gladly show it to the Curator of this division of your museum any time he is in New York.
>
> If my offer appeals to you, I would be glad to hear from you and remain,
>
> Yours truly,
> Paul A. Straub
>
> PAS:S
>
> Mr. Graf: See also letter of March 29, attached herewith.

In a supporting memorandum addressed to Dr. Alexander Wetmore, the Smithsonian's Assistant Secretary, Belote pointed out that Straub was

> intensely interested in art and history [in fact, he had a large library of Lincolniana] and this interest has expressed itself in the form of coin collecting. He has spared no expense to acquire a collection of the very finest specimens of exceptional art and historic interest and he now feels that he might assure the perpetuation of the collection by presenting it to some museum of the first rank in the United States where it might be permanently shown for the benefit of the American public. . . . At first he thought of offering the collection to the American Numismatic Society in New York but finally concluded it would have a wider sphere of usefulness if accepted by the U.S. National Museum. If the Museum should accept the collection, Mr. Straub will continue to add to the collection annually as a gift to the Smithsonian a large number of new specimens of the same fine character as those which it already contains.[168]

The Secretary replied to Straub on April 17, 1940:

> Dear Mr. Straub:
>
> We appreciate indeed your recent letter, in which you indicate that you wish to present your collection of coins to the Smithsonian Institution as an addition to our national collections in this important field. Your material is well-known to those working in numismatics, as containing only the finest type of specimens.
>
> You are no doubt familiar with our present important collection, to which your series would make a highly valuable addition. We handle this material under suitable conditions as regards display, and safeguard those parts of the collection that are not on public exhibition, but are used for study by experts, in a manner that insures their careful preservation. For some of the important gold coins on display, we use a special safety glass that protects against vandalism, a matter of definite importance now when the high price of gold is considered.
>
> With gifts such as the one you contemplate, it is our policy in all branches of the Museum to catalog the material given by the donor and to keep his name on the labels with each individual specimen. We arrange our collection according to some definite scheme of classification, interpolating new pieces that come to us from material such as yours in the proper place, with the name of the donor. The whole thus makes a unified display with each piece properly labelled. We do not find it practicable to display individual collections as a unit, since to do so detracts from the value of the collections as a whole, since it makes it necessary for those interested to go to several places to see our series covering a single subject. I am sure you will appreciate the desirability of having one systematic series so that the materials can be directly compared. I shall appreciate hearing from you further regarding your desires in the presentation of your collection.
>
> With appreciation of your attention, I am,
>
> Very truly yours,
> Charles G. Abbot
> Secretary.

Abbot wrote at the same time to Wormser to express his appreciation of "your long continued and valuable assistance." Wormser's reply of April 26, 1940, was characteristic of his unassuming attitude:

> I was very glad indeed to receive your kind letter of the 25th and to hear from you that the matter of the Straub

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[167] Letter in the USNM Archives, Accession 161590.

[168] USNM Archives, Acc. 161590.

Collection is of interest to you, and is making some progress.

Really I have done very little in this matter; for after all the prime factor in it is Mr. Straub's public spirit and I do hope that the ultimate bequest of the collection to the Smithsonian Institution will be accomplished.

I can assure you that it is a wonderful and representative collection of foreign gold and silver coins primarily, with many rarities, and material in first-class condition, and its ultimate acquisition by the Smithsonian would greatly strengthen its numismatic section.

Of course I shall be most interested in the progress of this proposition and hope that Mr. Straub will soon make a trip to Washington for the discussion of further details.

"I am rooting hard for it."[169]

This was Wormser's last letter to the Smithsonian for on May 22, 1940, this restless worker and dedicated friend of the Smithsonian's numismatic collections died unexpectedly.

Discussions concerning the donation continued. In July, Straub visited the Smithsonian and in October he invited Belote to examine his collection. Belote spent November 14 and 15 in New York and Summit, New Jersey, with Straub, and in a detailed memorandum he described the collection as well as the conditions attached to the donation.

On January 7, 1942, Assistant Secretary Wetmore wrote to Straub going into details connected with exhibiting, labeling, credit lines, and difficulties that would arise if blue velvet lining should be used as considered desirable by Straub.

In his reply of January 12, 1942, Straub set forth "three fundamental conditions" for the gift:

Thanks for yours of the 7th. I have carefully noted its contents and am pleased to know that my collection has had your consideration.

Replying I would say that there are only three fundamental conditions attached to my giving the collection to the Museum, viz.:

1. That the coins be carefully protected from injury and theft.

2. That they are appropriately and advantageously shown.

3. That they are made a permanent exhibit. All other matters are details that can be adjusted and arranged without trouble.

It matters little whether the cases are lined with blue velvet, if the pieces are shown to advantage in another way. I only suggested blue velvet because both silver and gold show up well on it.

Also it would be well to show your pieces with mine, for by so doing the object to my making the gift is attained. That is, to provide the nucleus for a better and larger collection,—one that will place at the disposal of the student and the artist specimens of the best coinage of other countries. Also to develop in our people a desire and demand for better designed monies than we have had in recent years. See our Commemorative half dollars and our Jefferson five cent nickel.

If you think it best to show silver and gold coins together I will agree to it, although I am of the opinion that it would be much better to separate them. Try and visualize a row of gold ducats following a number of large, coarse, double talers and talers. I am sure the small gold pieces would be overlooked. Gold coins are so much smaller and of so much finer detail that it seems to me they should be shown by themselves so as to bring out the beauty of detail.

If it is known that gold and silver are shown separately, I don't think any interested person would object to walking across an aisle to see both. I think the collection is so arranged in Berlin.

I don't consider a flat case the ideal way to show coins, and I only remember seeing coins so displayed in Paris at the National Library, and of course to the disadvantage of the pieces displayed.

The only way to show coins, to my way of thinking, is in upright cases, the way *you* show the American and other coins in the cases against the wall. However, they should be without the cases in front of them so that a person can get up close to the case and examine the pieces. What can one see of the details of a gold dollar or a two and a half dollar gold piece at a distances of say one to two feet, or when standing on one's toes and straining to see the piece at all.

I attach a sketch of my idea of an upright show case as I have seen them in many Museums for your consideration. The cases must be fitted with *safety glass* to prevent the glass being smashed or cut with a diamond and valuable pieces taken. There are gold pieces that cost up to $750., and silver pieces worth up to $500. and more in my collection, and they must be protected against accident or theft.

Attaching my name to the pieces means little to me, for like Andy Mellon I seek no notoriety in making the gift. However, that detail I would leave to you.

I hope that I have made my position clear, and I would be glad to hear from you further after you have considered it.

Of course, I'll be glad to come down to Washington to arrange details if we get together on the three main points. I enjoyed Mr. Belote's visit and it will give me pleasure to meet you.

On February 11, 1942, Dr. Wetmore wrote Straub accepting the collection under the stipulations offered by Straub:

Your kind letter of January 12 came to me in due time and I greatly appreciate your statements in it regarding your coin collection. That I have not replied to you earlier has been due to the present war situation which has made it

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[169] USNM Archives, Acc. 161590.

> a little difficult for me to see my way with regard to our collections. These matters are now clarified so that I know better where we stand.
>
> We should like to accept your collection under the stipulations offered at the beginning of your letter and can assure you that your wishes as indicated there will be met.
>
> At the present time I do not feel that it is proper to make extensive exhibitions of valuable gold coins for a number of reasons. The principal one among these is the possibility that we may have some sporadic bombing from enemy sources here along the Eastern seaboard. I am not pessimistic concerning the matter but is it definitely prudent to have this in mind and to make the proper dispositions in case such circumstances should arise. I would consider it very foolish not to make arrangements for such a possibility.
>
> There is a further matter that at the present time so far as I can see now it will be impossible to get the proper grade of *shatterproof glass for cases.* We have some of our coin cases now equipped with this glass made for us by the Pittsburgh Plate Glass Company from a special grade called water white which is so clear and so well prepared that there is no hint of coloring and consequently no indication of the lamination of the glass. This grade of glass is not available at the present time. The ordinary glass such as is used in our automobiles and in the armored trucks that transport valueabls around our cities will not serve since after a period of a year or two it becomes yellow and more or less opaque.
>
> We expect to place an important series of specimens from our coin collection in a location outside Washington where they will be properly guarded and safe from any bombings that may come to us here near the coast. I realize that you wish to make a permanent arrangement about your collection. May I suggest to you, therefore, the possibility that you may wish to make the transfer to us at the present time. It this is done we would accept the collection with the understanding that the bulk of it would be put into safe storage for exhibition at the close of the war. We would then arrange the storage of the material with the other specimens that we expect to remove from our collections here.
>
> If this does not meet with your approval perhaps you would be willing to consider the actual legal transfer of the collection to us at this time with the understanding that it would remain in your possession during your life.
>
> I shall greatly appreciate hearing from you in regard to these suggestions. I may add for your own information, and not for publication, that in common with other large museums we have removed some of our valuable specimens already and that other material is being packed. We expect to maintain our public exhibitions in their present extent and will merely change somewhat the type of things that we show. It is our definite feeling that our museums and art galleries have a highly important function in times like these in the mental relief they give to the individual from the stresses brought about by the matters of the day. At the beginning of the war in England the museums were closed but were opened almost immediately on public demand, and have been kept open often under the most trying circumstances since.

Straub, in turn, formally confirmed his gift with a letter dated February 26, 1942. At the same time he announed the preparation of an inventory and raised some questions concerning duplication of coins already represented in the national collections. Wetmore replied on March 9, and on the 29th Straub reported to Belote that he was making progress with the preparation of the inventory as well as with the acquisition of new pieces. Among others, he had acquired a 50-zecchini piece struck in the name of the Doge Paolo Renier of Venice (1779–1789) and had increased the number of gold coins to 1,450 and the number of multiple talers to 51 pieces.

After this the exchange of correspondence stopped until 1945, when, in reply to a letter of March 27 from Secretary Wetmore, Straub promised on April 3 that he would have the collection ready "any time after May 1st." He mentioned at the same time that the collection of gold coins had grown in numbers and importance. "There are now at least 1,750 gold pieces ranging from $\frac{1}{32}$ to 50 ducats."

Months went by and, in November, Straub apologized for the delay. He had discovered inconsistencies between his listings and the collection which he was attempting to clear up.

The delay in delivering the collection to the museum in the beginning was caused in part by World War II. The main reason, however, was Straub's ambition to build up first a collection which "Uncle Sam could be proud of." These were, in fact, the words used by himself on more than one occasion.

After its arrival in 1949, delays in displaying the collection followed. About half of the gold coins were installed in six upright cases by May 1950.[170] Problems in obtaining the special shatterproof glass delayed the installation of the other gold coins until May 1953.[171] Since that time the Smithsonian has had the largest display of gold coins on view anywhere in the world.

Straub continued to take an active interest in the exhibit, and in spite of advanced age, visited Washington from time to time, always bringing along a few coins to be added to the collection.

He was appointed an Honorary Fellow of the Smithsonian in 1955. He died on December 9, 1958, at the age of 93 years.

---

[170] Letter from Stuart Mosher to Paul A. Straub, May 19, 1950.

[171] Stuart Mosher to Paul A. Straub, May 7, 1953.

A last gift of seven gold coins which he had not been able to present himself reached the Museum a few days before his death, a moving symbol of Paul A. Straub's purposeful dedication.

In addition to the main donation in 1949 of 1,793 gold and 3,855 silver pieces, Straub over the years gave 67 other gold coins and 31 silver pieces. The entire donation amounted to 1,860 gold and 3,886 silver coins, or 5,746 pieces in all.

It would require a special publication to do justice to the overall significance of the collection. There are 27 10-ducat pieces represented in this collection, and even heavier coins including a 25-ducat piece of Transylvania struck in 1681 in the name of M. Apafi (fig. 72), a 25-zecchini piece struck in the name of the Doge of Venice Giovanni II Corner (1709–1722), and a 50-zecchini coin of Paolo Renier of Venice (1779–1789) (fig. 71). The great rarities contained in this collection are many; one example is the Russian 1882 gold 3-ruble piece of Alexander III, of which only 6 pieces were struck (fig. 73). Not much the lesser in importance is the collection of silver coins. There are, for instance, 50 multiple talers of the Brunswick duchies. Among them, five are 10-taler pieces. No references in other collections could be found, for instance, for the medallic piece dated 1677 (fig. 74) struck in the name of Johann Friedrich of New Lüneburg.[172]

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[172] Mentioned without other references by JOHN S. DAVENPORT, *Oversize Multiple Talers of the Brunswick Duchies and Saxe-Lauenburg* (1956), p. 60, no. 211. See also R. MULTHAUF, "Mine Pumping in Agricola's Time," *USNM Bulletin* 218. *Contributions from the Museum of History and Technology*, Washington, 1959, p. 115, fig. 1.

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NUMISMATICS—AN ANCIENT SCIENCE

A SURVEY OF ITS HISTORY

Elviza Eliza Clain-Stefanelli

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NUMISMATICS—AN ANCIENT SCIENCE

A Survey of its History

By Elvira Eliza Clain-Stefanelli

INTRODUCTION

This study has been prompted by the author's observation that many people regard numismatics simply as coin collecting, a pleasant hobby for youngsters or retired persons. The holder of such a viewpoint is unaware of the scope and accomplishments of a historical investigation that traces cultural evolution through one of the basic aspects of everyday human life: money. Seen as a reflection of past aspirations and accomplishments, coins are invaluable sources for scholarly research, but few people are aware of the tremendous amount of work done in this field by past generations.

The present monograph is intended to give only a synoptic view of the complex world of numismatic research. An area of knowledge that spans centuries and contains such varying fields as primitive media of exchange, coins, paper money, money substitutes, tokens, medals, and decorations, can hardly be given a detailed history by a single person in a single work.

Even in a survey such as this, before such wealth of material, many omissions are unavoidable, and, since this work is also intended for the nonprofessional, other omissions have been made to facilitate the presentation. Authors and their works have been carefully chosen to illustrate the main line of progress within specific areas. Citations of their books and articles are given in shortened form in the footnotes, with full references appearing at the end of the paper. Because coin collections have supplied the raw material for much investigation, the histories of some of the major private and public collections also have been included in this survey.

In my research, I have had an excellent guide in Ernest Babelon's chapter "La numismatique et son histoire," published in 1901 as part of the first volume of his *Traité des monnaies grecques et romaines: Théorie et doctrine.* Material on recent accomplishments has come from reports given by specialists to the international numismatic congresses. But without the helpful assistance received from leading European numismatists on the occasion of my visits to various numismatic museums, this study could not have been completed.

I am indebted to Dr. Nils Ludvig Rasmusson, Director of the Kunglig Myntkabinettet of the Statens Historiska Museum, Stockholm, as well as Professor Willy Schwabacher and Mrs. Ulla S. Linder Welin from the same institution for their kind interest in reading the galleys. Through their suggestions I have been able to benefit from the wide experience and knowledge which distinguishes these scholars in their fields. Of invaluable assistance in gathering basic information about the actual status of numismatics in different countries were: Prof. Felipe Mateau y Llopis, Director of the Biblioteca de Cataluña, Barcelona; Dr. Paul Grotemeyer, Director of the Staatliche Münzsammlung in Munich; Mr. Jacques Yvon of the Cabinet des Médailles, Paris; Mr. Antonio de Andreade Rebelo, Curator at the Museu Numismatico Portugues, Lisbon; and Prof. Walter Hävernick, Director of the Museum für Hamburgische Geschichte, Hamburg.

My gratitude also is extended to Dr. Otto Mørkholm, Curator of the Kongelige Mønt- og Medaillesamling, Nationalmuseet, Copenhagen, to Mr. I. G. Spasskii, Curator of the Numismatic Department at the Hermitage, Leningrad, to Professor Hansjörg Bloesch, in charge of the Münzkabinett of the Stadtbibliothek in Wintherthur, Switzerland, and to Mlle. Monique Du Verdier from the Bibliothèque Nationale, Paris, for their aid in securing important illustrative material; to Mr. Sawyer M. Mosser, Executive Director of the American Numismatic Society, New York, for many practical suggestions concerning the style of the manuscript, and to Mr. Richard P. Breaden and Mr. Geoffrey H. North, Librarian and Assistant Librarian, respectively, of the American Numismatic Society, New York, for their continual help; to Mr. Isadore Snyderman, New York, for providing translations from the Russian. Finally, without the assistance of my husband, Dr. Vladimir Clain-Stefanelli, this work would have never reached its conclusion.

EVOLUTION OF A SCIENCE

About a hundred and twenty years ago, a historian, Friedrich Creuzer, called numismatics "the enlightenment of archeology." He characterized the coin as "a mirror of the ancient world, which indicates the progress of the arts, which accompanies human society in all its aspects, civic life, laws, institutions, wars, conquests, peace treaties, changes of government, trade, and alliances. It perpetuates the fame of noble generations and it keeps alive the memory of great men." [1]

Expressed in the exuberant language of the romantic era, this is the rather vivid description of a discipline which traditionally has been regarded within the strict denotation of its Greek or Latin root—*νομισμα* or nummus (coin)—as the science of coins. So terse a definition as the latter, however, suggests little of the origin and scope of an area of research that often is looked upon as a branch of history and archeology. The function of coins as an official product of the issuing authority, as an essential element in trade, as a reliable source of information for historic, linguistic, and epigraphic phenomena, as a subtle interpreter of artistic trends, and, above all, as a clear reflection of many aspects of human society through the ages, usually escapes the layman and even the student. Numismatics, with a record as a scholarly discipline which dates back at least to the 13th century, suffered greatly in prestige because of its earlier methods. Necessarily descriptive at first, it emerged very slowly as a more interpretative science wherein emphasis on the application of established data became the basis for research of a broader nature.

With English and especially German scholars as the leading theoreticians, numismatics as a science has moved more and more toward a definition which would include the essential problems of origin, scope, method, and application. Such a direction was pointed out in 1921 in a lecture by the German numismatist Behrend Pick.[2] It has since become the subject for many learned debates among scholars,[3] all of whom seem to agree at least in one respect—that numismatics can aspire to scientific honors only if it approaches coins primarily in their historical function as money.[4]

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[1] Babelon, *Traité*, vol. 1, col. 66.

[2] His lecture, "Die Münzkunde in der Altertumswissenschaft," was presented at a meeting of philologists in Jena, 1921, and published in Gotha, 1922. It was reproduced later in his *Aufsätze zur Numismatik* (1931).

[3] Jesse, "Aufgaben und Grenzen der Numismatik" (1924–1926); Schwinkowski, "Numismatik und Geldwissenschaft" (1929); Gebhart, *Numismatik und Geldgeschichte* (1949); Loehr, "Numismatik und Geldgeschichte" (1957); Gebhart, "Von der Numismatik zur Geldgeschichte" (1959).

[4] The relation between numismatics and history has been discussed in Grierson, *Numismatics and History* (1951); Breglia, "Possibilità e limiti del contributo numismatico alla ricerca storica" (1957); Sutherland, *Ancient Numismatics: A Brief Introduction* (1958); Wallace, "Greek Coins and Greek History" (1958); Jones, "Numismatics and History" (1956); Grant, *Roman History from Coins* (1958); Braun von Stumm, "Die Münze als Hilfsmittel der mittelalterlichen Kulturforschung" (1953).

Pick drew a sharp distinction between pure numismatics (*reine Numismatik*) and applied numismatics (*angewandte Numismatik*). Under the first, he confined the simple activities of collecting, classifying, and describing coins—a preoccupation which he rated on a lower scale and which he, therefore, assigned contemptuously to the nonspecialist, the amateur, the collector. On the other hand, applied numismatics, according to him, became the science that permits the scholar to deduce from coin material important conclusions applicable to the related fields of social, political, and economic history, and art and philology. This latter approach he reserved for the scholar, the highly trained specialist.

This attempt to define numismatic science failed completely. Within a few years Wilhelm Jesse contested these ideas by pointing out that very often even purely descriptive activities require the knowledge of a highly trained person.[5] To disregard coin catalogs would be similar to a historian's ignoring a collection of published documents. The qualitative difference between an inferior listing of coins and a highly specialized publication of numismatic material rests upon the approach and methods used. Moreover, Jesse contended, applied numismatics cannot be considered an independent science since it results from a blend of other disciplines.

Starting from these premises, Jesse proceeded to state his own definition of numismatics as a science. Since coins were created for the practical purpose of serving as a medium of exchange, it seemed logical that their research should begin at this point. Thus, Jesse argued, the search into the history of *all* past forms of money—attempting to explain their origin, their evolution, their extrinsic appearance as well as their intrinsic qualities, their relation to economics, to social and to cultural history—is the real scope of numismatics as a scientific and historical discipline.

While some scholars were involved in theoretical discussions of this theme, others tried to give it a practical application. For example, in the Vienna coin cabinet, August von Loehr built the collections and exhibits according to such a historical concept of money, beginning with primitive media of exchange and bringing the exhibits up to the present complex period of financial documents; and in the United States, exhibits recently arranged at the Smithsonian Institution emphasize similar ideas (fig. 1).

Beyond the basic requirements of accurate description and allocation within a geographical and historical framework, other factors, which involve history, law, economics, art, philology, religion, and even philosophy, must be taken into consideration. A complementary science to all these disciplines, numismatics in turn utilizes them also in its own research. With this reappraisal, the field of numismatics has expanded considerably, increasing the knowledge requirements for every numismatist.[6] The scholar has to exchange the delightful pastimes of the antiquarian and hobbyist, the *Liebhaber* of the past, for the more exacting work of the scientist who must possess an almost encyclopedic knowledge. Specialization within a determined field or period, as a result, seems the only workable solution.

When he approaches the economic function of coins as money, the researcher today sees many new factors entering his field of vision. Following this predominant school of thought, numismatics should broaden its scope from a science restricted to coins or metallic currency, *l'archéologie de la monnaie métalique*,[7] to a science of all forms of money—including primitive media of exchange, necessity money, money substitutes, and documents of value.

Although primitive media of exchange generally are considered to be within the province of anthropology, recent numismatic theories concerned with a philosophic explanation of the origin of money have resorted to the forms of value and exchange used by early or contemporary primitives. Examples of such theories are Bernhard Laum's *Heiliges Geld: Eine historische Untersuchung über den sakralen Ursprung des Geldes* (1924), which explains the origin of money as an expression of primitive cult forms and not as a phenomenon produced by economic factors; and Wilhelm Gerloff's *Die Entstehung des Geldes und die Anfänge des Geldwesens* (1947), which emphasizes sociological factors as the explanation for the origin of money.

As seen in the history of monetary values, in the history of prices and wages, and in the evolution of national economies with their ensuing theories, there is an implicit connection between numismatics and

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[5] "Aufgaben und Grenzen der Numismatik" (1924–1926), pp. 3–5.

[6] See Haevernick, " 'Cooperation': Some Thoughts and Suggestions for the Intensification of Numismatic Research" (1958).

[7] Gelder, "Rapport sur la numismatique moderne," p. 104.

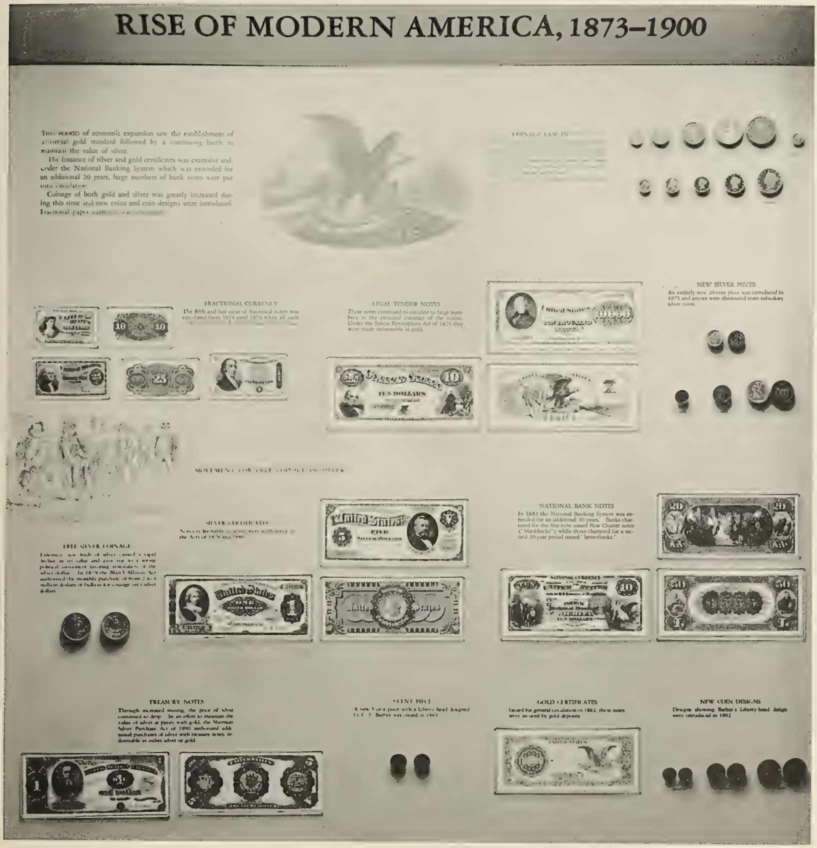
RISE OF MODERN AMERICA, 1873–1900
FRACTIONAL CURRENCY
LEGAL TENDER NOTES
NEW SILVER PIECES
NATIONAL BANK NOTES
SILVER CERTIFICATES
FREE SILVER COINAGE
TREASURY NOTES
GOLD CERTIFICATES
NEW COIN DESIGNS

Fig. 1.—Coin Exhibit in the Smithsonian Institution, illustrating numismatics as the history of money (Div. of Numismatics photo).

economics.[8] On the other hand, considerations of a broader nature—the causal relations between money and the problems of the universe or of the human mind and soul, as seen in such works as Georg Simmel's *Philosophie des Geldes* (1922), and E. Eppich's *Geld: Eine sozialpsychologische Studie* (1921)—are part of the philosophy and psychology of money, but, admittedly, they present only loose ties with numismatics as such.

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[8] For bibliographical information, see Schalk, "Nationalökonomie und Numismatik" (1891); Luschin von Ebengreuth, *Die Münze als historisches Denkmal* (1906); Jesse, "Münze und Geld in Geschichtswissenschaft" (1937).

The history of art, however, offers a wider and more pertinent relationship with the field of numismatics—to the mutual benefit of both areas. In many cases, so-called applied numismatics enables the art scholar to use numismatic evidence as a support or invalidation of certain historical conclusions or to supply entirely new evidence that is unobtainable elsewhere.

Coins often are a basic historical source. To the trained eye of the archeologist or historian, they may reveal aspects of civilizations and races which have disappeared and left few or no records. A classic example of such research is the brilliant detective work accomplished recently by Prof. Andreas Alföldi of the Institute of Advanced Study at Princeton. Dr. Alföldi cast light upon the cult of Diana-Hekate-Selene—a syncretistic threefold divinity venerated in the sanctuary at Aricia (Italy)—by re-interpreting the figures (previously identified as nymphs) represented on a tiny Roman Republican silver coin which had been struck in 43 B.C.[9]

In many cases coins can help to date ancient monuments; the composition of hoards may serve as circumstantial evidence in tracing migrations, army encampments, trade routes, or tides of colonization and expansion. Actually, the beginnings of numismatics as a scholarly discipline is related to such an application of old Roman coins in the Renaissance and pre-Renaissance: Italian historians used these coins to help identify ancient portrait busts of emperors or to interpret passages from classical authors.

THE SOURCES OF ANCIENT COINS

What has brought ancient coins into the hands of collectors and scholars?

One answer which may seem unusual to modern man is the fact that, in earlier times, coins often circulated for centuries, defying national borders; the metallic content was the only guarantee necessary for their acceptance. One of the most eloquent examples of such an occurrence was found in southern France, where copper coins which had been struck during the reign of Constantine the Great (A.D. 323–337) still were circulating in remote places during the time of Napoleon III (1852–1870).[10] Another instance comes from Spain, where a bronze coin of the Roman Emperor Domitian (A.D. 81–96) was found to have circulated until 1636 when it was counterstamped during the monetary reform of Philip IV.[11]

Another fact which contributed to the increase of interest in old coins was their special appeal as ornaments and jewelery. Many ancient rings, bracelets, necklaces, and even medieval reliquaries utilized coins which were considered beautiful, precious, or miraculous. Lenormant, quoting from contemporary sources, mentions that "ancient coins in gold and silver were used in jewels like gems." [12]

The main source of coins, however, especially ancient Greek and Roman pieces, is the innumerable hoards which have been uncovered. Entrusted to safe, deep hiding places in the ground or in a river-bed in moments of danger, war, fire, or even for normal safekeeping, these coins often are brought to the surface, by pure chance, decades or, in many cases, centuries later. Local legends of a blue flame, a will-o'-the-wisp, monsters guarding treasures, or curses protecting pirate hoards have helped to perpetuate the memory of tremendous wealth hidden in the earth. Some of the most fantastic folk tales fade before many extraordinary finds. Treasures of almost limitless wealth, exquisite beauty, as well as inestimable value for historian and art-historian are found continually, the number of coins sometimes exceeding tens of thousands.[13]

The ancient author Philostratus (c. 170–245) mentions a hoard of 3000 Persian gold darics found in Antioch, Syria, before A.D. 250. In about 1543 peasants discovered, in the streams of the river Streiu in Transylvania, the famous "treasure" of the Dacian king Decebalus, consisting of over 40,000 Greek gold staters.[14] The Adriatic coast of the Balkan peninsula is often the site of large finds of Roman silver denarii—a witness sometimes of the misfortunes of a retreating army which lost its entire pay chest. The devastating marches of armies during the Seven Year's War (1756–1763) were the source of many of the treasures found on German territory. Intricate Byzantine and especially Arab trade routes, confirmed by coin finds which lead as far north as the Russian and Scandinavian territories, or the widespread commercial transactions of the Vikings are only a few aspects of the complex life of the Middle Ages which have come into fuller light through invaluable information drawn from coin hoards.[15]

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[9] "Diana Nemorensis" (1960).

[10] Friedensburg, *Die Münze in der Kulturgeschichte*, p. 3.

[11] Blanchet, "Sur la chronologie établie par les contremarques" (1907).

[12] *La monnaie dans l'antiquité*, vol. 1, p. 35. See also Hill, *The Medallic Portrait of Christ* (1920); Zadoks-Jitta, "Notes and Questions on Coin Ornaments" (1957), "Munsieraden" (1958); Grierson, "The Canterbury (St. Martin's) Hoard of Frankish and Anglo-Saxon Coin Ornaments" (1955).

[13] See Blanchet, "Les rapports entre les dépôts monétaires et les événements militaires, politiques et économiques" (1936); Haevernick, "Welches Material kann die Numismatik zur Feststellung der Verkehrsgebiete in Deutschland im XII. und XIII. Jahrhundert liefern" (1936); Werner, "Münzschätze als Quellen historischer Erkenntnis" (1950–1951).

[14] For a detailed account of this hoard, see Marţian, "Comori ardelene" (1921); Noe, *Bibliography of Greek Coin Hoards*, p. 265.

High tides, heavy rainfalls, an axe, or a plough, by pure accident, will unearth treasures which have lain for centuries or even milleniums within man's reach. Very often, of course, scientifically directed excavations of historic sites yield coins along with the archeological findings. In many instances these coins serve to date other artifacts of the site, or, if the case requires, the coins in turn can be dated with the help of objects already dated. Studies of coin finds from archeological excavations have often resulted in valuable contributions to ancient numismatics. An example of such, among many, is the work done in recent years by a number of American scholars.[16]

The past eighteen years have produced, by a surprising coincidence in separate locations, some of the most extraordinary finds in ancient Greek coins. Workmen engaged in modern construction on the site of an ancient Greek sanctuary in the little Sicilian town of Gela found almost a thousand silver coins. This hoard has proven to be one of the greatest accumulations of archaic Greek coins, containing an impressive series of some of the best examples of coin art of the late 6th and early 5th centuries B.C. A few years earlier, a hoard of Syracusan dekadrachms—generally considered the most beautiful Greek coins of antiquity—dating from the late 5th century B.C., was discovered in the bed of a small creek in southern Sicily. A find in Tunis of Carthaginian one-and-a-half gold staters and a recent discovery of large silver dekadrachms from Carthage make these exceedingly rare coins—known heretofore from only a few specimens—accessible now to many collectors. The Boston Fine Arts Museum recently acquired a hoard of fifteen late Roman aurei and five gold medallions from one of the most important finds of Roman gold coins in the past few decades. Similarly, the hoards of thousands of Venetian ducats continually being found in the Near East afford increasing evidence to the historian of the thriving trade routes which once connected this Italian maritime republic with the Levant.

In such ways new varieties and even new coin types and denominations constantly appear, shedding light on the dim image of events or monuments which are separated by a long space of time from our own civilization. Unfortunately, records of these hoards often are scattered or deliberately distorted despite the attempt of scholars to register all finds as often and as faithfully as possible.

The wide possibilities for numismatic research opened up by expert investigation of coin hoards, recognized in the past by such scholars as Bror E. Hildebrand or Kurt Regling, have led in recent decades to intensified work in this field. Numerous publications have appeared in the postwar period. The list of outstanding European scholars involved in this research ranges widely, from Sweden to Spain, from France to Russia, the countries beyond the Iron Curtain participating actively in the effort. Currently, a new problem has arisen: to coordinate, on an international basis, all the efforts and methods of this scientific investigation of coin hoards which has been done separately by the various national groups.

Some countries try to solve the immense workload through a systematic scanning of all the data available. Many publications in this aspect of research come from: Germany, with Munich as the center for the Roman hoards found in that country,[17] and Hamburg, for the German catalog of hoards buried after A.D. 800; England, where James David A. Thompson published an *Inventory of British Coin Hoards, A.D. 600–1500* (1956); and East European countries, where Mrs. E. Nohejlová-Prátová in Prague and Mr. Jacek

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[15] For the Byzantine trade, see Adelson, *Light Weight Solidi and Byzantine Trade* (1957) and "Early Medieval Trade Routes" (1960); Grierson "Commerce in the Dark Ages" (1959). For the Viking period, see Jankuhn, *Haithabu, ein Handelsplatz der Wikingerzeit* (1956); Lewis, *The Northern Seas: Shipping and Commerce in Northern Europe, A.D. 300–1100* (1958). For more bibliographical information, see Berghaus, "Die frühmittelalterliche Numismatik" (1961); Rasmusson, "Scandinavian Medieval Numismatics" (1961).

[16] See Bellinger, *Catalogue of Coins Found at Corinth, 1925* (1930), *Two Roman Hoards from Dura-Europos* (1931), *The Third and Fourth Dura Hoards* (1932), *The Sixth, Seventh and Tenth Dura Hoards* (1935), and *The Coins* (1949); Thompson, *Coins from the Roman Through the Venetian Period* (1954); Cox, *Coins from the Excavations at Curium, 1932–1953* (1959); Buttrey, "The Morgantina Excavations and the Date of the Roman Denarius" [in ms., to be published].

[17] A commission directed by Prof. Konrad Kraft has been preparing many reports under the general title *Die Fundmünzen der römischen Zeit in Deutschland*, of which two have been published: Kellner, *Oberbayern* (1960); Franke, *Rheinland-Pfalz:* vol. 1, *Rheinhessen* (1960).

Slaski in Poland have tried to summarize in their publications the numerous but widely scattered data on coin hoards within their national territories.[18]

Extremely active also in this field are many outstanding scholars such as Nils L. Rasmusson and a group at the Kungl. Myntkabinettet in Sweden; James D. A. Thompson, Philip Grierson, Michael Dolley, Robert A. G. Carson in England; Jean Lafaurie and a group at the Cabinet des Médailles in France; J. Lallemand in Belgium; and Felipe Mateu y Llopis as the leading name in Spain.

Literary information about coin hoards is given due emphasis in most numismatic publications, but attempts to make widely dispersed data more easily accessible have brought forth a new kind of bibliographical publication such as Sydney P. Noe's *Bibliography of Greek Coin Hoards* (1925) and Sawyer Mosser's *Bibliography of Byzantine Coin Hoards* (1935). Both are major attempts to collect all of the bibliographical information pertaining to the coin hoard material of a specific period.

Similarly, many numismatic monographs devote special chapters to hoards. An example is Rudi Thomsen's recent study, *Early Roman Coinage: A Study of the Chronology* (1957), an attempt to review and revise the controversial problem of the dating of the so-called Romano-Campanian and early Roman issues. Mr. Thomsen regards the actual composition of hoards as essential evidence in establishing the chronological sequence of different issues and as a strong clue for their conclusive dating.

BEGINNINGS OF COIN COLLECTING

We probably can assume with safety that coin collecting extends as far back into history as coins themselves. The incentive to gather coins as well as any other interesting object is comparable to a refined hunting instinct, which can be found at any human age level regardless of social or cultural background; only the motive or goal defines the difference among collectors. Coins as expressions of the wealth to be found in gold and platinum, odd coins as curios, old coins as historical mementos, beautiful coins as specimens of art, coins as sentimental souvenirs of special dates, events, or places—these are only a few of the motives behind coin collecting. Every historical period or geographical area is characterized by its peculiar interest. Even collecting as a financial investment has emerged as a recent trend—something practically unknown in earlier times when collecting was determined largely by historical and artistic considerations.[19]

Since the days of the Greeks and Romans, the classical authors, such as Pliny or Plutarch, have written about famous art collections. Although not specifically mentioned, these collections probably included many coins famous for their artistic qualities and even signed by well-known artists.[20] Such a probability is supported by the viewpoint that the beauty of ancient coins and the apparent care used in preparing their dies demonstrates the high regard in which the esthetically minded Greeks held coins. The issuing of coins often was a subject of national pride, an incentive for competition among cities. Western Greeks, especially in Syracuse, surpassed the rest of the Greek world in the mastery of coin engraving. An example of obvious contemporary appreciation can be seen in a cup of black-glazed terracotta from South Italy, a so-called Calene kylix, of which one is preserved in the Boston Fine Arts Museum (fig. 2).[21] This bowl uses, as a center medallion, the head of the nymph Arethusa, reproduced from the already famous Syracusan dekadrachm which had been engraved by Euainetos in the late 5th century B.C.[22]

To collect and even reproduce such paragons of ancient engraving was not an isolated phenomenon in the ancient world. More than likely, among the objects of art collected by the royal houses of the Ptolemies of Egypt and the Seleucids of Syria, or maintained in the famous collection of King Mithridates VI of Pontus, which was brought in triumph to Rome after his defeat by Lucullus and Pompey (65 B.C.), there were rare and beautiful Greek coins.

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[18] Nohejlová-Prátová, *Nálezy minci v. Cechach, na Morave a ve Slezsku* (1955–1958); Slaski and Tabaczynski, *Wczesnośredniowieczne skarby srebrne Wielkopolski* (1959).

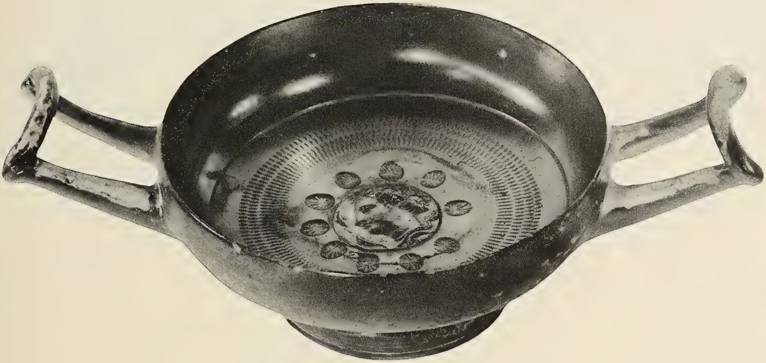
[19] As an example, see Bilinski, *Guide to Coin Investment* (1958).

[20] See Forer, *Notes sur les signatures de graveurs* (1906); Tudeer, *Die Tetradrachmenprägung von Syrakus* (1913).

[21] Another specimen from the Metropolitan Museum is reproduced in Richter, "A Greek Silver Phiale," p. 386.

[22] Additional information is in Evans, "Syracusan Medallions" (1891), and especially Richter, "Calenian Pottery" (1959) and "Ancient Plaster Casts" (1958).

The historians Pliny and Livy as well as Cicero give accounts of the tremendous treasures brought to Rome by her victorious generals. Pliny states that Servillius "removed, in accordance with the rights of war and his powers as general, from the enemy city that his strength and valor had captured, statues and objects of art which he brought home to his countrymen, displayed them in his triumphal procession, and had them entered in the official catalog of the public treasure." [23] Certainly among such booty was money—that is, coins. Larger coin accumulations already had been recorded in earlier times, when pious pilgrims deposited precious gifts in the sancturaries of temples.[24] Ernest Babelon called these deposits in the Heraion in Samos, in the Artemision in Ephesus, and in the shrines of Delos, Delphi, and Olympia, "the museums of antiquity." [25] Julius Schlosser affirms that the treasuries of the gods became, in fact, public property and that, in a particular sense, the temple-shrines and their territories could be considered the oldest public museums.[26]



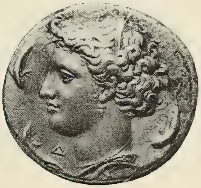


Fig. 2.—Syracusan Dekadrachm copied on a kylix from Cales (photos courtesy Museum of Fine Arts, Boston, above, and American Numismatic Society).

The coin—its origin and essence—was a favorite subject discussed often by Greek philosophers. Aristotle's definition of the coin as an ingot of specific intrinsic content, with a legal value determined by the state, and Plato's rejection of gold coinage in favor of copper are theories which have stimulated deeply the thinking of economists and historians since ancient times.[27]

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[23] Cicero, *Verrine Orations*, i. 21. 57.

[24] See the discussion on deposits of coins and precious objects in the foundations of the Artemision in Ephesus in Robinson, "The Date of the Earliest Coins" (1956).

[25] Babelon, *Traité*, vol. 1, col. 68.

[26] Schlosser, *Kunst- und Wunderkammern*, p. 4.

[27] Gonnard, *Doctrines monétaires* (1935).

With the rise of Roman civilization, coins lost considerably in their esthetic qualities. Shaped by the more utilitarian character of the Romans—who revered national glory and family tradition more than culture and art—coins tended less to be objects of refined artistic interpretation and were invested, instead, with the more practical characteristics of a gazette.[28]

One of the basic approaches especially favored by the Roman Emperors was the use of coins as an important medium of propaganda, with the intention of diffusing and, at the same time, preserving for posterity an account of glorious events. This fact implicitly conferred on coins the character of historical documents and, indeed, they did prove to be ideal records for the Romans. Small, easy to store, almost impervious to mutilation or decay, relatively easy to obtain, coins could hardly have failed to appeal to the history-minded Romans as objects which were immediate witnesses to the past.

It was customary in Rome, as it also had been in Greece, to present coins as gifts on festive occasions, a tradition which Ovid has recorded.[29] The historian Suetonius (in Augustus 73) records that Emperor Augustus would distribute on the occasion of the Saturnalia festivities, among other precious gifts, various unknown foreign coins or coins with portraits of ancient kings: ". . . nummos omnis notae, etiam veteres regios et peregrinos." Apparently, Augustus was following a general trend when he included in his largess old coins as precious and desirable objects.

Interest in old coins was continued by some of Augustus' successors, Titus, Domitian, and especially Trajan; in fact, the latter reissued some silver and even a few gold coins of not only his predecessors but also of the Roman Republic. Such "restitution" coins, marked clearly as such by the addition of the inscription REST[ITUIT], duplicated exactly the design and legend of the originals. They furnish significant evidence for the existence of some sort of collection of old coins which could have served as models for the "restitution" issues—without supporting Robert Mowat's greatly disputed theory that the Roman mint had a collection of old dies which were used in the striking of these special issues.[30] At any rate, these "restitution" coins do reveal a certain "numismatic" interest which could have been responsible in part for initiating the issues, although undoubtedly the chief motivation was the attitude toward coins as an official chronicle of past glory.[31] Trajan, for example, reissued in A.D. 107, among other coins, silver denarii struck during the Republican era by the moneyer Quintus Tatius (fig. 3): he also reissued the so-called Romano-Campanian didrachm which had been struck even earlier, sometime between 235 and 220 B.C. In using coins which were over three hundred years old, Trajan not only recognized, as did his predecessors, the political and religious importance of coins, but also their historical significance. In a sense it might be said he helped to foster "numismatic" interests among the Romans.

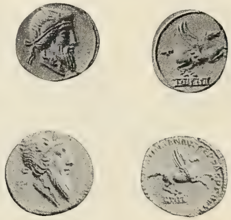

Fig. 3.—ROMAN REPUBLICAN DENARIUS, top, and Trajan's "restitution" coin (author's photo).

The rapid expansion of the Empire brought Romans into contact with strange and hitherto unknown civilizations. It is reasonable to assume that the enormous booty brought back to Rome by its victorious generals contained, among other objects of value, innumerable coins which found their way into private collections, along with gems and cameos—items related to coins through subject matter and engraving technique. Even if the discriminating taste of the art-loving Greeks was not always evident in the Roman public art "collections," in the parks, or in the magnificently adorned villas of patricians, the Romans certainly tried to imitate the refinement of Greek culture and to appear as patrons of the arts. It is a well-known fact, mentioned by Horace, that, during the late period of the Republic, patricians paid exorbitant prices for statuary works,[32] or, in Pliny's words: ". . . there is an almost more violent passion for works of fine handicraft. . . . the orator Lucius Crassus had a pair of chased goblets, the work of the artist Mentor, that cost 100,000 sestertii."[33]

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[28] ALFÖLDI, "Main Aspects of Political Propaganda on the Coinage of the Roman Republic" (1956).

[29] MÜNSTERBERG, "Über die Anfänge der Numismatik" (1914).

[30] MOWAT, "La reconstitution des collections de coins aux Ier et IIe siècles" (1900); see also MÜNSTERBERG, op. cit.

[31] MATTINGLY, "The Restored Coins of Trajan" (1926), with a good bibliography on the subject, and "The 'Restored' Coins of Titus, Domitian and Nerva" (1920): see also BERNHART, *Bibliographischer Wegweiser*, p. 57.

Augustus himself indulged in the pleasures of the collector, and it was said that he was exceedingly fond of fine furniture and Corinthian vessels. His houses he adorned not so much with statues and pictures as with "things which were curious, either for their antiquity or rarity." At his retreat in Capri he had "huge limbs of sea-monsters . . . and also arms of ancient heros."[34] We can safely assume that some beautiful coins found their way into the same collection since they were given occasionally as gifts.

Coin collections, even if not specifically mentioned by the authors, probably had their place of honor among many art objects. There is direct comment on an aspect of coin collecting: Pliny is surprised to learn that "spurious methods are objects of study, and a sample of a forged denarius is carefully examined and the adulterated coin is bought for more than genuine ones."[35]

In later periods, from the 4th century and far into the 7th century A.D., large medallions in bronze and gold were distributed by the emperors on special occasions.[36] These tokens of imperial munificence functionally combined their role as historical records with their more basic aspect as objects of monetary value—both of which caused these pieces to be kept and treasured.

MIDDLE AGES AND EARLY RENAISSANCE

With the decline of Rome's political might—undermined by economic chaos and subjected to the steadily growing pressure of invading peoples from the East—Roman culture and civilization soon were on the verge of collapse. The leisure of the "golden era" of Augustus or Hadrian was gone, and retrospective or contemplative occupations like coin collecting certainly were out of place. Moreover, the rise of Christianity, with its strong ascetic spirit, hardly would help promote investigations into coins, which reflected a pagan past populated by gods, goddesses, and heroes, all with a strong emphasis on physical beauty. As a result, ancient coins for the most part remained in oblivion. The Middle Ages, with its household-centered economy, with trade and travel reduced to a minimum, knew little about coins. While gold circulated freely in the Byzantine Empire, the man in the West seldom saw more than small silver coins. Under such circumstances any collection of coins had only a slim chance of surviving the great scarcity of mintable metal. The attitude of the Middle Ages toward works of art—and implicitly coins—can best be characterized as follows: "Some saw in them monuments of idolatry and as such reproved them; others attributed magic forces to them; others again were carried away by admiration inspired by the immensity of Roman ruins, the wealth of prime material, the perfection of manufacture."[37]

Very often old pagan representations were assimilated as Christian symbols, and it was not rare for a Hercules or an Aphrodite to be regarded as Christ, the Good Shepard, or the Virgin. Ancient gems with mythological subjects were misinterpreted and often were attributed supernatural powers. Moreover, seldom did ancient coins fail to be regarded as talismans;[38] their inscriptions presented, in most cases, an additional element of mystification. A classic example is a tetradrachm of Rhodes, incorrectly identified for centuries as one of the "thirty pieces of silver" for which Judas betrayed the Saviour (fig. 4). In another instance, a gold solidus struck in the name of Emperor Zeno (A.D. 474–491) was worshipped in Milan, Italy, as "argento dei tre magi," or the coin offered by the Magi to the infant Christ.[39]

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[32] Cf. Münsterberg, op. cit., p. 271; Richter, "A Greek Silver Phiale," p. 385.

[33] Pliny *Natural History* xxxiii. liii. 147; Cicero *Verrine Orations* ii. 7. 14.

[34] Suetonius, *Lives of the Twelve Caesars:* Augustus, lxviii–lxx.

[35] *Natural History* xxxiii. xlvi. 132.

[36] Toynbee, *Roman Medallions* (1944); Gnecchi, *I medaglioni romani* (1912).

[37] Müntz, *Les Précurseurs de la Renaissance* (1882), as quoted in Babelon, *Traité*, vol. 1, col. 75.

[38] Mély, "Le numisma Laetiense de 1213" (1897).

[39] Hill, *Medallic Portraits of Christ*, p. 111; Babelon, *Traité*, vol. 1, col. 77.

The compelling mysticism which guided pilgrims toward the Holy Land was extended also to the coins which pious men brought back from their pilgrimages. These coins surpassed by far the interest accorded to the usual souvenir pieces of travelers, and they were invested with supernatural powers. Occasionally mounted in reliquaries, these pagan coins—bearing, for example, the facing head of Sol the sun-god—became objects of Christian piety.[40]

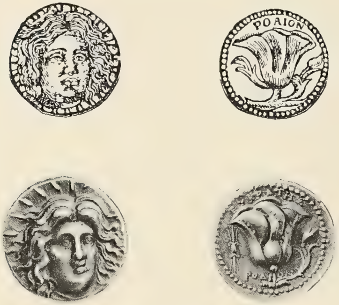

Fig. 4.—Tetradrachm of Rhodes, regarded as one of the "thirty pieces of silver," as published in 1553, and the actual coin (photos from Rouille, above, and courtesy American Numismatic Society).

Ancient classical tradition, never entirely extinct even during the darkest hours of history, began to revive with the aid of enlightened persons about the turn of the millennium. Earlier, during Charlemagne's time, Roman tradition had reappeared as a stimulus for civic and cultural awakening, but with Frederick II of Hohenstaufen (1212–1250) art and erudition came into a resplendent revival which was built on an ancient and especially Roman background.

Frederick's newly created gold coin, appropriately called *augustalis*,[41] in many respects reflects Roman coin concepts and designs (fig. 5). The implication again seems unavoidable that there was a source of inspiration strong enough to determine a decisive turn from medieval coining traditions back toward earlier classical forms. The creation of this coin certainly suggests the presence of Roman coins from which it drew an apparent inspiration. Can this factor be considered sufficient evidence for the existence of coin collections? Due to the lack of adequate documentation, we may only assume that it does.

Italy, the classic land of archeological treasures, constantly revealed evidence of an earlier, superior culture with sculpture, monuments, inscriptions which puzzled medieval man and posed intriguing problems. In a sense it was impossible to erect spiritual barriers strong enough to repress the revival of classical culture. Even the Christian church had to adjust to the new challenge; Thomas Aquinas proceeded to complete the integration of classical learning within the framework of Catholic theology. It is interesting to note that, among the preoccupations of these encyclopedic minds of the late 13th and 14th centuries, monetary theories were often a cherished subject. In *De regimine principis* Aquinas discusses the function and evolution of money,[42] and Nicholas Oresmius (1320–1382), in his *Tractatus de origine, iure nec non et mutationibus monetarum*, gives numismatics the serious consideration of a science.[43] Gonnard regards Oresmius as the founder of an economic monetary doctrine,[44] and, as Babelon states, "with Oresmius, there finally appeared a reformer and a theoretician."

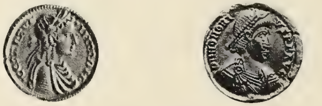

Fig. 5.—Augustalis of Frederick II (1212–1250) and gold solidus of the Roman Emperor Honorius (395–423) (author's photos).

During these times, when the spiritual lethargy of the early Middle Ages seemed to be passing and a desire for erudition to be awakening, coins proved a wonderful and direct source of learning. As a result, the general quest among humanists and art lovers to collect interesting and beautiful coins spread rapidly, and soon the pre-Renaissance period was rich with remarkable collections. An outstanding example of such art lovers is the great Florentine Petrarch (Francesco Petrarca, 1304–1374), one of the most brilliant minds of the early Renaissance, the "first modern man," as he has been called. This greatest among Italian humanists owned ancient coins and appreciated them highly. In his *Epistolae de rebus familiaribus* he describes with emotion the coins he bought from peasants during his stay in Rome, coins on which he could decipher the names and features of Roman emperors: ". . . sive ut emerem, sive ut insculptos eorum vultus agnoscerem." He presented some ancient gold and silver coins to Emperor Charles IV as a stimulus for the ruler to follow in his reign the example of Rome. On this occasion Petrarch confessed how much he enjoyed collecting coins: ". . . aliquot sibi aureas argenteasque nostrorum principum effigies, minutissimis ac veteribus litteris inscriptas, quae in deliciis habebam, dono dedi . . . ."[45]

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[40] For the story of many of these pieces—regarded as the authenic coins of Judas and worshipped in numerous churches of the Middle Ages—and their influence on contemporary Biblical interpretations, see Hill, op. cit., pp. 91 ff. and especially 104–114.

[41] For the "augustalis", see: Winkelmann, "Über die Goldprägung Kaiser Friedrichs II" (1894); Pfister, *Kaiser Friedrich II*, pp. 184, 192; Wahl, *Wandler der Welt*, pp. 258, 271; Wentzel, "Der Augustalis Friedrichs II und die abendländische Glyptik" (1952).

[42] For Aquinas' economic writings, see Contzen, *Thomas von Aquino* (1861); Jesse, *Quellenbuch* (1924); Gonnard, *Doctrines monétaires* (1935).

[43] For Oresmius, see Wolowski, *Traictie* (1864); Johnson, *The De moneta* (1956); Dieudonné, "La théorie de la monnaie à l'époque féodale et royale" (1909).

[44] *Doctrines monétaires*, p. 125.

Petrarch's interest in Roman antiquities was shared by many of his friends, among them the famous tribune of the people and leader of a popular uprising against the patricians in Rome, Cola di Rienzi (1313–1354). A listing of collectors in the 14th century would include numerous other famous names, most of them Italian.

By a strange irony, Petrarch's great admiration for these minute, ancient historic documents initiated the nefarious custom of "counterfeiting" ancient coins. From his stimulus, Marco Sesto and Francesco Novello of Carrara began to engrave coins in imitation of ancient pieces. In their eagerness to complete the iconographic series of Roman emperors they were not aware that they actually were violating the cardinal requirement in numismatics—authenticity. Such reproductions found ready acceptance and many collectors followed the example of Duke John of Berry, who included in his own collection a number of such portrait coins. In addition to original compositions of the sixteenth century, there can be found also the so-called Paduans, a collective name which designates a group of ancient coin imitations, chiefly Roman medallions, begun by the famous engraver Giovanni Cavino (1500–1570) from Padua.[46] His work found words of appreciation as late as the 18th century, when German numismatists like Johann David Köhler[47] or Johann Heinrich Schulze praised his artistic skill and his sincere intentions in propagating interest in Greek and Roman art. Currently, as Prof. Willy Schwabacher has noted,[48] these pieces are not regarded any longer as falsifications in the true sense of the word.

The rise of the Italian maritime republics of Venice and Genoa, with their far-reaching commercial ties, brought considerable wealth to the mainland. On the basis of flourishing economic conditions, an unparalleled upsurge in cultural activities began. The upper classes of these republics competed against the aristocracy and the wealthy bourgeoisie of other powerful Italian cities like Florence, Siena, Pisa, Milan, as well as the splendid court of the popes in Rome. There, Cardinal Barbo, who later became Pope Paul II (1464–1471), assembled an outstanding collection of antiquities which formed the basis for the St. Mark Museum. In the art collections of the Farnese, ancient coins found their place.

Antonius, Cardinal of St. Mark, a nephew of Pope Eugene IV (1431–1447), was well known for his collection of ancient coins, which contained 97 gold and over 1000 silver coins.[49] In Florence the great Cosimo de' Medici (1389–1464) included, in his collection of famous art objects, Greek and Roman coins, to which his sons Pietro and Lorenzo the Magnificent (1448–1492) added many significant pieces. An inventory taken in 1465 shows 100 gold and 503 silver coins in the Medici cabinet, to which later were added 1,844 copper coins.[50]

Alfonso V (1416–1458) of Aragon, King of Sicily and Naples, a true son of the Renaissance who read and admired the classical authors, kept his coins in an ivory coffer which he carried along on his travels. It was said that the sight of these pieces was a strong incentive for him to imitate the virtues of those whose images they represented.

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[45] Babelon, *Traité*, vol. 1, cols. 83–84.

[46] See Lawrence, *Medals by Giovanni Cavino* (1883); Chowen, "Paduan Forgeries of Roman Coins" (1956); Bernhart, "Paduaner" (1912); Kisch, "Numismatisches 'Kunstfälschertum' im Urteil der Zeitgenossen" (1954). For bibliographical information, see Bernhart, *Handbuch*, p. 373.

[47] *Historische Münzbelustigungen*, vol. 18, pp. 102–104

[48] "Münzen des Altertums," pp. 153–154.

[49] Serafini, *Le monete del Medagliere Vaticano*, vol. 1, introd.; Müntz, *Les arts à la cour des Papes* (1878–1882).

[50] See Müntz, *Les collections des Médicis*, pp. 16, 38, 74, 79.

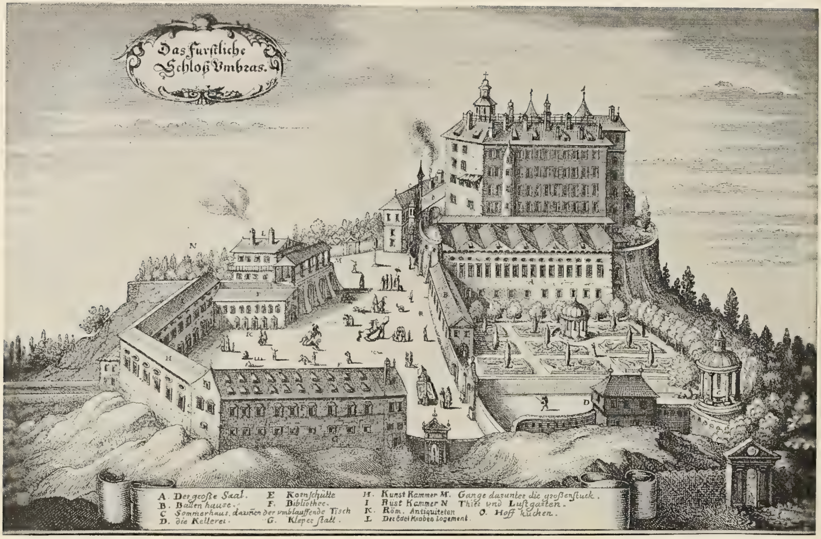
Das fürſtliche Schloß Ambras.
A. Der groſſe Saal.
B. Ballenhause.
C Sommerhaus. darinnen der umblauffende Tisch
D. die Kellerei.
E Kornschütte
F. Bibliothec.
G. Kleper ſtall.
H. Kunst Kammer M. Gange darunter die groſſenſtuck.
I Rüst Kammer N Thier und Luſtgarten.
K. Röm. Antiquiteten O. Hoff kuchen.
L Der Edel Knaben Logement.

Fig. 6.—Ambras Castle in the Tyrol where Archduke Ferdinand kept his art treasures (photo from Schlosser).

Beyond the Alps, the Hapsburgs were prompted to collect coins in order to complete the portrait galleries of the Holy Roman emperors by including the Roman iconographic series. Old documents indicate there were collections in Hapsburg possession as early as the 13th century, but not until Emperor Maximilian I (1493–1519) can we speak of an actual coin collection at the Vienna court. The first reference to it occurs in an inventory made by the Imperial "Kammerdiener" Heuberger in 1547 during the rule of Emperor Ferdinand I (1531–1564), a great patron of art who created the Viennese "Kunstkammer" in 1563.[51] At the Court of Buda in Hungary, King Matthias Corvinus (1458–1490) assembled a circle of humanists and antiquarians who helped him enrich his collections of art objects and ancient coins.

One of the characteristics of most of the collections during the 15th and 16th centuries was their heterogeneous content. They were planned as accumulations of precious objects—such as jewels and rich garments—of unusual specimens, and of curios. These early periods betray little of the refinement reflected in many of the collections of the later Renaissance, when genuine esthetic appreciation of art objects and a scholarly interest in science and history were the chief criteria. The approach of the pre-Renaissance collector was less sophisticated; in childlike bewilderment, he yearned mainly for the exotic, the mystic. In the "Wunderkammern"[52] curio cabinets, skeletons of strange animals, and artifacts of remote peoples often abounded and even took precedence over real products of art. Only very slowly was the mysticism of the Middle Ages dissipated before a realistic approach to nature and the childish desire for puzzling wonders was replaced by a mature pleasure in exquisite art objects or interest in documents of the past.

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[51] Ferdinand I referred to his collection in his will; see Luschin von Ebengreuth, *Die Münze als historisches Denkmal*, p. 39. For the inventory, see Holzmair, "Das wiedergefundene Inventar der Münzsammlung Ferdinands I" (1961).

[52] See Schlosser's interesting work *Die Kunst- und Wunderkammern der Spätrenaissance* (1908).

One of the famous "Wunderkammern" of the 16th century was in the castle of Ambras near Innsbruck (fig. 6). Here Archduke Ferdinand (1529–1595), a son of Emperor Ferdinand I, accumulated an extensive collection of historic objects.[53] During its time the fame of the Ambras museum spread far among contemporaries, and many scholars and traveling nobles considered it a worthwhile attraction. Among other things, the Archduke had an excellent collection of Greek and Roman coins, which apparently he enjoyed and studied frequently since he had constructed two elaborate coin cabinets wherein he could store his treasures (fig. 7). After his death the coins, with the rest of the collections, were sold by his son to Emperor Rudolph II. In 1713, during the reign of Charles VI, many of the coins were selected by C. Heraeus for the Vienna cabinet.

During the late 14th century, France could claim the most famous art collector and patron of the age in John the Duke of Berry (1340–1416), brother of King Charles VI. The fame of his art treasures, which he kept in the castle at Mehun-sur-Yèvre, travelled far, and even a half century later an Italian scholar observed that the Duke was well known as an art lover and no sum of money was too high for him to acquire an important work of art.[54] The inventory of his collection, made by Jules Guiffrey between 1401 and 1416, included, in addition to a notable collection of Roman gold and silver coins, five large gold medallions with various scenes on the reverse. The Duke had purchased these pieces for a large sum in Italy with the intention of illustrating the history of Christianity during the Roman Empire.

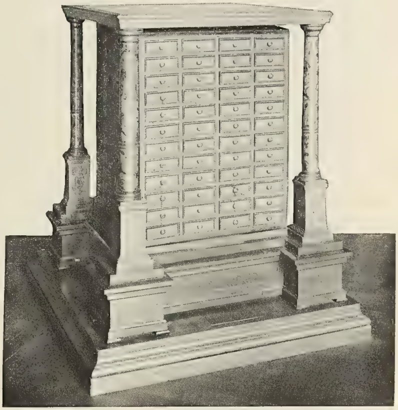

Fig. 7.—Coin Cabinet of Archduke Ferdinand of Tyrol (photo courtesy Kunsthistorisches Museum, Vienna).

RENAISSANCE AND CINQUECENTO

When the mysticism of the Middle Ages had faded and more empirical thinking had set in, the past and its luminous world of the ancients came to life through historical and philological research. Classical authors were studied, interpreted, and imitated. Anything that could bring quattrocento man nearer to the ancient sources of knowledge was valued highly, and coins often were regarded as a key to the mysterious world of the past. The pre-Renaissance and the Renaissance itself were, therefore, a golden age for the development of numismatics—when coins were collected and studied with increased intensity, interpreted and sometimes misinterpreted. Because the outburst of this resplendent, vigorous, and youthful intellectuality was not limited to a select number of scholars but flowed in a broader current which broke through social barriers, the number of devotees grew rapidly.

Although Petrarch's broad outlook and scholarly approach conferred upon numismatics the dignity of a real science and although popular preoccupation with coins took a more erudite turn, learned absurdities were not rare. With Gutenberg's invention, books containing pictures became popular, and, as a result, iconographic studies of ancient rulers and literal presentations of ancient myths were published

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[53] Schlosser, op. cit., pp. 36–66; Neickelio, *Museographia*, p. 21.

[54] Schlosser, op. cit., p. 26.

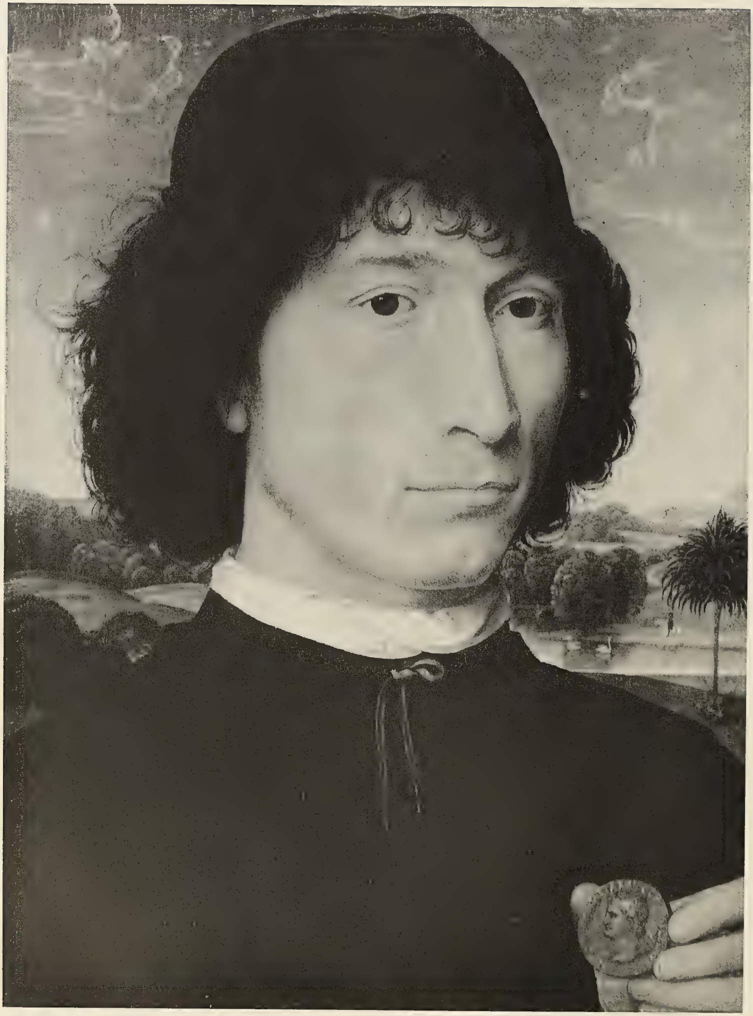
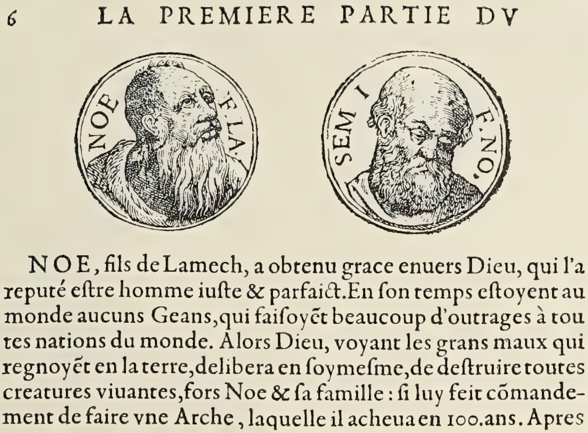


Fig. 8.—Italian Renaissance Gentleman with coin of Emperor Nero in a painting by Hans Memling (photo courtesy Musée Royal, Antwerp).


NOE F.LA.
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6 LA PREMIERE PARTIE DV

NOE, fils de Lamech, a obtenu grace enuers Dieu, qui l'a reputé eſtre homme iuſte & parfaict. En ſon temps eſtoyent au monde aucuns Geans, qui faiſoyēt beaucoup d'outrages à toutes nations du monde. Alors Dieu, voyant les grans maux qui regnoyēt en la terre, delibera en ſoymeſme, de deſtruire toutes creatures viuantes, fors Noe & ſa famille : ſi luy feit cōmandement de faire vne Arche, laquelle il acheua en 100. ans. Apres

Fig. 9.—Section of Page from *Promptuaire des médailles* (1553) by Guillaume Rouille (Div. of Numismatics photo).

along with the coin illustrations. Only the eagerness to fill in missing information can explain the amazing fabrications of some of these early writers. In *Promptuaire des médailles des plus renommées personnes qui ont esté depuis le commencement du monde*, published in Lyon in 1553 by Guillaume Rouille, there appear, in addition to the drawings of real coin images, imaginary portraits of Adam, Noah, Osiris, Agamemnon (fig. 9). Not only was such fiction mixed with fact but also the real coins themselves often were interpreted to fit the purposes of the author. For example, the river-god Gelas, a man-headed bull, which appears on an ancient coin from the Greek city of Gela in Sicily, is identified as the minotaur. Comparison with the actual coin reveals how the drawing was changed by addition of the invented legend MINOTAVRVS (fig. 10).[55] In another instance, for a coin of the Thracian king Lysimachus, who used the head of Alexander the Great on the obverse, Rouille takes the king's name from its original Greek on the reverse and places it, in a Latin spelling, beside Alexander's head on the face of the coin (fig. 11).[56]

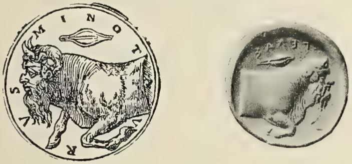

Fig. 10.—River-god Gelas on a coin from Sicily, interpreted as the minotaur by Rouille, and actual coin (photo from Rouille, left, and author's photo).

The naive approach of such early publications aroused only a limited interest; more mature treatises, which appeared during the cinquecento, had a wider appeal. The Italian humanist Angelo Poliziano (1454–1494) published his *Miscellaneorum centuriae primae* in 1489 in Florence. In this essay he discussed, among other things, ancient coin images such as the daggers on Brutus' coin, regarded generally as an expression of liberty. After this publication, various other numismatic monographs followed in France,

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[55] Rouille, *Promptuaire*, p. 43.

[56] Ibid., p. 136.

Germany, Holland, and Spain. Their authors [57] often reflected new trends in research, such as attempts to approach problems of metrology or the value of ancient coins.

First place among them certainly belongs to the French scholar Guillaume Budé (1467–1540), a friend of Francis I. Budé won repute for an excellent collection of Greek and Roman coins, which he used as the basis for *De asse et partibus ejus*, one of the most famous numismatic works of the period. Published in 1515, it was reprinted in 16 subsequent editions by 1550.

Wilibald Pirckheimer in Germany, with his *Aestimatio priscorum numismatum* (1533), Henricus Mameranus, with his *Priscae monetae ad huius nostri temporis diversas aliquot nationum monetas supputatio* (1550), and Didacus Covarrubias y Leyva in Spain, with his *Veterum numismatum collatio cum his quae modo expenduntur* (1556) are only a few of the authors who tried to explain to contemporaries the significance of ancient coins. The history of prices, the juridical problems of false coins, and the technical aspects of coin manufacture are some of the other questions which were discussed and to which the Germans Georg Bauer [Agricola] (*De mensuris et ponderibus Romanorum atque Graecorum*, 1550) and Joachim Camerarius (*Historia rei nummariae Graecorum et Latinorum*, 1556) tried to bring new answers.

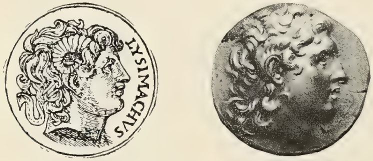

Fig. 11.—Tetradrachm of Lysimachus of Thrace, as represented by Rouille, and actual coin (photo from Rouille and author's photo).

In 1511 Margareta Peutinger, wife of the German humanist Conrad Peutinger, sent to her brother Christoph Welser, for publication, a numismatic paper on the titles of Roman emperors. For the same period Ernest Babelon [58] reports the name of Wolfgang Lazius (1514–1563), a Viennese doctor who, in his *Commentatiorum vetustatorum numismatum* (1558), first conceived the idea of a "corpus nummorum," compendium of all the coins of antiquity—a gigantic project which has seemed too ambitious even for modern numismatists.

Fig. 12.—Guillaume Budé (1467–1540), Director of the Bibliothèque Nationale, Paris (photo courtesy Bibliothèque Nationale).

In Italy Fulvio Orsini (Fulvius Ursinus), called the "father of ancient iconography," gained a wide reputation not only through his treatise on ancient portraits, *Imagines et elogia virorum illustrium et eruditorum ex antiques lapidibus et numismatibus expressa* (1570), but also through his large collection of coins, manuscripts, and books, and through his exceptional ability to detect false coins. His correspondence and travels brought him into contact with scholars and collectors in many countries, who, in turn, approached him on numerous occasions for his opinion as to the authenticity of certain pieces.

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[57] See listings in Luschin von Ebengreuth, *Allgemeine Münzkunde*, pp. 709; Bernhart, *Handbuch*, pp. 3–4; Babelon, *Traité*, vol. 1, cols. 99 ff.

[58] Babelon, *Traité*, vol. 1, col. 99.

Portugal, during the 15th century, produced an outstanding collector in the person of Don Alfonso of Portugal Count of Ourém (d. 1460) and grandson of King John I. He collected many antiquities during his travels to Italy and Germany. His example was followed by King Manuel I (1495–1521), who possessed, according to *Lyvro da recepta*—an "inventory" of the time—many precious objects which included gold, silver, and copper coins. In the early 1600's Don Alfonso, Bishop of Evora, published the first Portuguese work on numismatics, *Tractatus de numismate*, which, unfortunately, has not survived.[59] Interest in serious scholarly work in Portugal also is attested to by the translation in 1535 into Portuguese of Guillaume Budé's *De asse et partibus ejus*.

In Holland a treatise of Erasem van Houwelingens, *Penningboek* (1597), became the basis for later studies on the historical significance of Dutch coins. The noteworthy fact in this instance is that a scholar turned his attention to the coins of his own time and country.

Greater progress was made, however, in the field of Roman numismatics. The names of the German doctor and humanist Adolph Occo (1524–1606) from Augsburg and of the Dutch scholar Hubert Goltzius (1526–1583)[60] became landmarks in the evolution of numismatics into a science. Occo in his publication *Imperatorum Romanorum numismata a Pompejo Magno ad Heraclium* (1579) abandons the grouping of Roman coins by metal and adopts, instead, a chronological classification. Goltzius' tractate on Roman coins, published in several parts in Antwerp and Brussels (1557–1579) and generally known under the title of the 1708 edition, *De re nummaria antiqua opera quae extant universa quinque voluminibus comprehensa*, became the standard reference for Roman coins for over two centuries. It was a major step in the development of numismatic science.

One of the factors which contributed to the excellence of Goltzius' work was the wide knowledge which he had acquired through the study of many collections. In order to assemble the necessary information, he traveled extensively and visited many coin cabinets throughout Europe. It is amazing to read the list of these collections: 380 in Italy, over 200 in France, a like number in Holland, over 175 in Germany. Outstanding personalities in European affairs and the names of the highest nobility were represented on this list. In the words of a later commentator, Bimard de La Bastille, "there was no prince nor lord who did not pride himself in owning coins, although there still were many among them who could not even read." [61]

Under such circumstances, coins ceased to be merely historical documents sought by dedicated scholars in their quest for new evidence and became objects of value and curiosity: conversation pieces, art in miniature, unusual adornments (for vases, coffers, furniture), jewels, luxuries, or, as Babelon said, "une mode de bon ton." [62]

In Augsburg, during the 16th century, the wealthy banker Hans Jakob Fugger owned, in addition to a famous library and precious manuscripts, a coin cabinet which was rich in ancient gold and silver coins purchased mostly in Italy by the antiquarian Jacobus de Strada of Mantua (d.1588). Author of a famous work on Roman coins, *Epitome thesauri antiquitatum* (1553), translated into French by Jean Louveau,[63] de Strada acted for many years as a purchasing agent for the emperors Ferdinand I, Maximilian II, and Rudolph II. Other well-known collectors of Roman coins in Augsburg were Dr. Adolph Occo, mentioned above, and Dr. Thomannus. The wealthy German city of Nuremberg contained the famous art and coin collections of Christoph Friedrich Imhof and Paulus Praun.[64]

In 1571 the library and the coin cabinet of Hans Fugger were bought by Albrecht the Magnanimous of Bavaria, founder of the "Kunstkammer" in Munich. The Dutch doctor Samuel von Quickelberg, who organized, at Albrecht's orders, the Munich collections, also mentions coins as collector's items in his treatise *Theatrum sapientiae* (1565), a book devoted to such "Raritätenkammern." The Munich collection increased considerably during the reigns of Wilhelm V (1579–1597) and Maximilian I (1597–1651) and eventually became one of the outstanding coin cabinets in Central Europe,[65] surpassing the collections of

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[59] BATALHA REIS, "O primero tratado" (1953) and *Cartilha da numismática*, vol. 1, p. 53; LEITE DE VASCONCELLOS, *Da numismática em Portugal* (1923).

[60] For further information, see WEIL, "Zur Geschichte des Studiums der Numismatik," pp. 252–253; DURAND, *Médailles et jetons*, pp. 80–81, 146–147.

[61] BABELON, *Traité*, vol. 1, col. 103.

[62] Ibid., col. 89.

[63] *Epitome du thresor des antiquitez, c'est à dire, pourtraits des vrayes medailles des empp. tant d'Orient que d'Occident* (1553).

[64] NEICKELIO, *Museographia*, pp. 162–165.

[65] See RIGGAUER, *Geschichte des königlichen Münzkabinets* (1890); BERNHART, "Geschichte der Staatlichen Münzsammlungen" (1934).

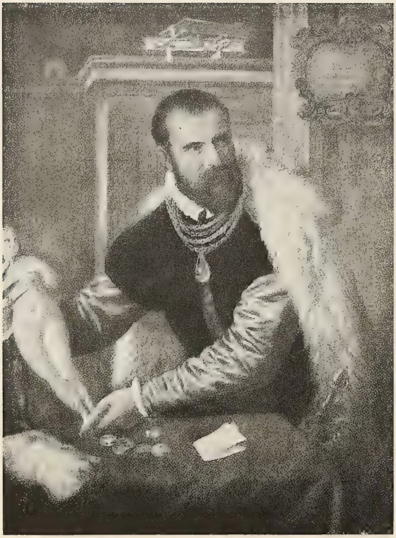

Fig. 13.—Jacobus de Strada (1505–1588), Italian antiquarian, in a painting by Titian (photo courtesy Kunsthistorisches Museum, Vienna).

the Saxon Princes in Dresden (which were inventoried by Tobias Beutel in 1587) and those of the Dukes of Gottorp in Kassel.

In Brandenburg, according to tradition, the Prince Elector Joachim II (1535–1571) established the Berlin numismatic cabinet, which was later enlarged considerably under Frederick the Great.[66] It is possible that such cultural preoccupation at Joachim's court was stimulated by Count Rochus Guerini, an architect who came from Florence via Paris.

In Italy, especially in Rome and Florence, coin collections were to be found in the palaces of the nobility: the Farneses, the Barberinis, the Massimis, and the Ottobonis. Equally famous were the collections assembled by nephews of the popes: Antonio Condulmerio, Cardinal of St. Mark's; Alessandro Cardinal Farnese; and Filippo Cardinal Buoncompagni.[67] The well-known scholar and maecenas Fulvio Orsini (1529–1600), at his death, left 70 gold, 1,900 silver, and over 500 bronze coins, the majority of which he bequeathed to Odoardo Cardinal Farnese. Pope Urban VII in 1628 made a gift of 600 silver coins to his nephew Francesco Cardinal Barberini. The beginnings of the numismatic collection of the Vatican can also be traced to this period—about 1555—during the Pontificate of Marcellus II.[68]

In Spain, through Philip II (1556–1598), a noted art lover, many collections were brought to the Escorial,[69] among them the coins of Antonio Agustín, Bishop of Lerida and Archbishop of Tarragona, considered by many as the father of Spanish numismatics.[70] His fame was based on his work *Diálogos de medallas, inscripciones y otras antiguëdades*, published by Felipe Mey in Tarragona in 1587 and translated a few years later into Italian—*I discorsi del S. Don Antonio Agostini sopra le medaglie et altre anticaglie* (1592).

A Dutch scholar, Abraham van Goorle (1549–1609), author of a treatise on Roman coins—*Thesaurus numismatum romanorum sive nummi ad familias romanas spectantes* (1605)—assembled a collection of 4,000 gold, 10,000 silver, and over 15,000 bronze coins. These eventually came into the hands of Charles I of England. The famous "Juxon Medal" handed over to the Archbishop by Charles on the scaffold is often mentioned as evidence of the King's fondness for rare coins. His collection, after many peregrinations during the civil wars, ended up in Sweden in Queen Christina's cabinet.

In France the coin collection which Catherine de Médicis (1519–1589), wife of Henry II of France, brought with her from Italy met a similar fate: these coins, inherited by her son Charles of France (1560–1574), were scattered during the religious wars. Within a few decades, however, an even better collection was assembled by King Henry IV (1589–1610). A French gentleman, Pierre Antoine de Bagarris, was assigned the task of acquiring coins for the royal collection, which was eventually to become the famous Paris coin cabinet.

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[66] Friedlaender and Sallet, *Das königliche Münzkabinet*, pp. 12–18; Menadier, *Die Schausammlung*, p. 1.

[67] For the history of the Vatican collections, see Serafini, *Le monete del Medagliere Vaticano*, vol. 1, introd.

[68] Ibid., pp. XV–XVII.

[69] Garcia de la Fuente, *Biblioteca de San Lorenzo de el Escorial* (1935).

[70] For the collection of Father Agustín, see Mateu y Llopis, "Un inventari numismatic del segle XVI" (1929–1932); for the life of Father Agustín, see Lopez, "Iconografia di Antonio Agustín" (1952), and Rivero, *Don Antonio Agustín* (1945).

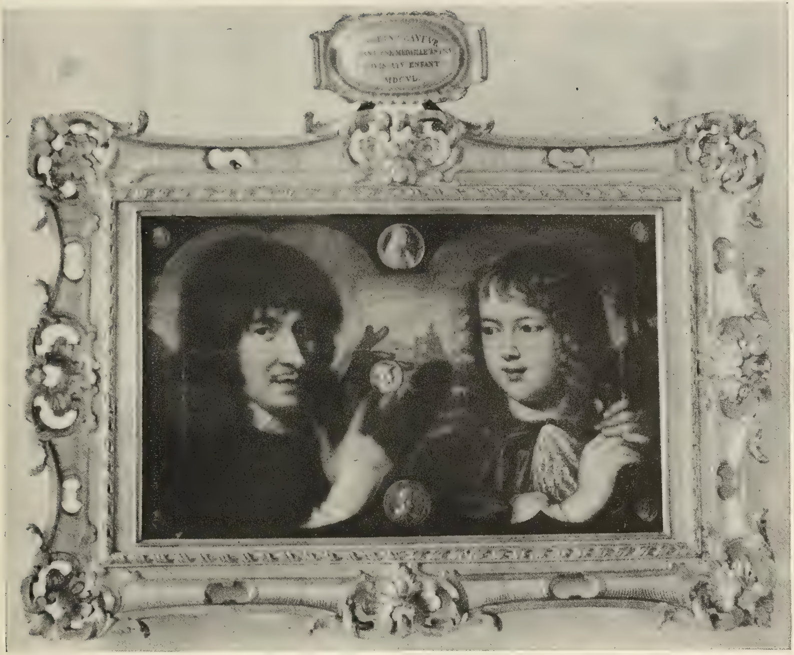

Fig. 14.—JEAN VARIN showing a medal to Louis XIV in a painting by François Lemaire (?) (author's photo).

An interesting passage in Bagarris' report to Henry IV—in which he narrates the history of the collection of Catherine de Médicis—states that, in France, the "great king Francis [Francis I], Henry II, the other subsequent kings and queens, their wives and mothers and grand princes," and, in Italy, the princes and lords, especially the Medicis, owned important coin collections. Apparently it was unnecessary to convince the king of such importance because Henry IV himself stated that he wanted a collection "to embellish the royal residence, to assist the Crown Prince in his education, and to offer to contemporary artists good examples to imitate." [71] This princely education can be seen in a contemporary painting, of his grandson, the young Louis XIV, admiring a medal which Jean Varin, the director of the Paris mint, is showing him (fig. 14).

Undoubtedly, coins and especially ancient coins did present a special interest to artists. To note just one example, Peter Paul Rubens, the great Flemish painter, is known to have bought a collection of 18,000 coins, which he later resold.

The earliest known coin auction took place in Leyden toward the end of the 16th century, when the collection of a French gentleman was sold in this manner in 1598.

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[71] BABELON, *Traité*, vol. 1, col. 120.

SEVENTEENTH CENTURY

The enormous upsurge which occurred in numismatics during the 16th century—illustrated here through only a few salient examples—continued to increase steadily during the 17th century. As a science, numismatics had outgrown its childhood. The sometimes naive approach of the early 1500s, with their fictitious representations, tended now to be replaced. Broader knowledge of numismatic material available in hundreds of collections in every civilized country contributed to more mature and exact interpretation. The general tendency during the 17th century was an interest in registering as much unknown material as possible. Thus, the publication of catalogs of collections was given special attention.

Also during the 1600s, the development of most of the famous coin cabinets of Europe took a decisive upward turn. France, through a series of favorable circumstances, became the leading country in this regard. At least two famous collections from this period should be mentioned.

Gaston, Duke of Orleans (d. 1660) and brother of Louis XIII, owned at his residence, the Palais de Luxembourg, an outstanding collection, which he housed in six cabinets. He spared neither effort nor expense to obtain rare pieces from Italy and Greece, and he considered his collection important enough to bequeath to his nephew, Louis XIV. Surprisingly, the Sun King found more than transitory interest in it and, advised by his Finance Minister Colbert, he built the collection into one of the most outstanding coin cabinets in Europe.

Adding it to the cabinet previously set up by Henry IV, Louis increased the collection through continuous acquisitions. He had the cabinet moved into the palace of the Louvre, entrusting it to the care of Pierre de Cracavi, a friend of the philosopher Blaise Pascal. French missionaries and ambassadors in Italy, Greece, and the Orient received special orders from the king to be on the lookout for ancient coins. During this time, serving as his chief agent was Jean Foy Vaillant (1632–1706), a name which was to remain associated with numismatics for centuries. Commissioned by Colbert to search for coins in foreign countries, Vaillant visited Italy, Sicily, Greece, and even Persia and Egypt. Once, bad fortune brought him into the hands of pirates in Algeria: in order to save some gold pieces, he did not hesitate to swallow them; at least, this is the story he later told a friend.[72]

Through Vaillant's profound knowledge of the subject and his relentless drive, many interesting coins came into the royal collection. A dedicated scholar, he also published many works on ancient numismatics covering a variety of subjects, from the coins of the Seleucides, Ptolemies, and Arsacides to the popular field of Roman coins.[73] The most noteworthy among his publications was *Numismata imperatorum Romanorum praestantiora* (1694).

The French royal collection, thus enriched, became one of the king's favorite pastimes. Because he wanted it always located within his immediate reach, he had the cabinet transfered in 1683 to Versailles. Louis had the habit of visiting his collection daily, devoting much time and enthusiasm to the study of coins. He remarked that he enjoyed doing it because he could always find something new to learn.

To be custodian of the coins, the king hired a Swiss numismatist and engraver André Morell (1646–1705), who was assigned the task of publishing an inventory of the collection. Morell, an exceptionally gifted scholar and an excellent designer, conceived of his work as a general synopsis ("recueil") of all existing ancient coins in European collections. He intended to accompany his descriptions with adequate drawings. This plan, a revival of Lazius' "corpus" idea, was doomed to failure, and Morell never succeeded in fulfilling his dream. Moreover, the treatment which he received in France was not exactly conducive to promoting his work. Twice imprisoned in the Bastille for his religious beliefs, he finally decided to leave the country. When he was asked by the Prince of Schwartzenberg and by the Prince Elector of Brandenburg to arrange their collections, Morell departed in 1691 and spent the rest of his life in Germany.

The major collections of the period find their best descriptions in the prefaces which Vaillant, a contemporary of Morell, added to his voluminous work. In these pages he usually listed the chief cabinets he had consulted during his trips through various countries. From them we can obtain a fairly good idea of numismatics as a hobby in that age. Among the outstanding collections which he saw were the cabinet of Queen Christina of Sweden (at that time in Rome), the collection of Alessandro Farnese in Parma,[74] the collection of the Este in Modena (dating from the late 1400s),[75] the Savoya cabinet in Turin, the Lavagna Collection in Genoa, and numerous other collections in the Low Countries, Switzerland, Spain, and Germany.

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[72] Babelon, *Traité*, vol. 1, col. 138.

[73] See the list of his works in Babelon, *Traité*, vol. 1, col. 142.

In England, Vaillant studied the collection of James II, who had built his cabinet around a nucleus inherited from his predecessors—among them Oliver Cromwell. Other English cabinets are mentioned by Vaillant, such as the collections of the Duke of Buckingham, Henry Hyde, and Count Arundel. In 1677 the antiquarian Elias Ashmole (1617–1692) laid the foundation at Oxford for a museum that today houses the famous Heberden Coin Room.

Noteworthy royal coin cabinets in other parts of Europe were the collection of the king of Denmark and especially that of Queen Christina of Sweden.

Stimulated by the extensive collection of Ole Worm (d. 1654), rector of Copenhagen University, Frederick III of Denmark assembled a remarkable group of coins, chiefly Roman, which was published by Holger Jacobaeus in 1696.[76] This group formed the nucleus for the world-famous Royal Collections of Coins and Medals of the Danish National Museum in Copenhagen.[77]

The core of the collection of Queen Christina in Sweden can be traced back to her royal ancestors.[78] Part of this assemblage of over 15,000 coins (which the Queen took with her after her abdication in 1654) had been started during the 16th century. Some of the coins had come from war booty, others had been gifts of King Charles X Gustavus (who paid 10,000 taler in Nuremberg for a collection which he presented to Christina in 1652), but most of the coins had been assembled through the Queen's purchases. During her journey to Rome many pieces were lost and some had to be pawned in Brussels because of her debts. In Rome, where Christina took permanent residence, the coins and the antiquities, to which she added many important pieces, were accessible to scholars for study at her home the Palazzo Riario alla Lungara. Since the collection was especially strong in the Greek and Roman series, it served as a source of reference for most of the prominent numismatists of that period. At her death, Christina left over 6,000 coins, which passed into the possession of Prince Livio Odescalchi, a nephew of Pope Innocent XI.

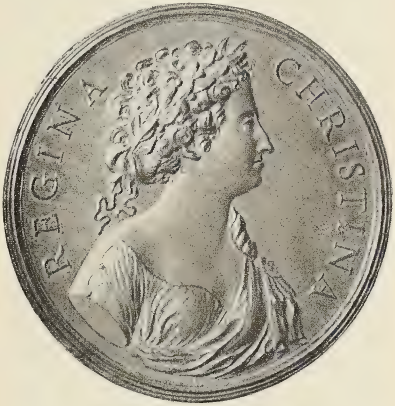

Fig. 15.—Medal of Queen Christina of Sweden (1626–1689) (photo from Bildt).

About the same time, the Berlin collection of Frederick William I (1640–1688) of Brandenburg, the "Great Elector," was described by contemporaries as "deserving the visit and the attention of all those who cultivate interesting things."[79] Already increased substantially by Frederick's predecessor, George William (1619–1640), this coin cabinet in 1686 absorbed the famous collection of the Rhinegrave Charles Louis. The latter assemblage numbered over 12,000 pieces, of which a catalog had been published in 1685 in Heidelberg by Laurenz Beger. By 1690 the Berlin collection contained over 22,000 coins.

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[74] A catalog of the Farnese gold, silver, and copper coins was published in 10 vols. by the Jesuit father Pedrusi, *I caesari . . .* (1694–1727).

[75] There is a catalog of the collection made in 1540 by Calcagnini.

[76] See the history of the Copenhagen Royal Coin Cabinet by Breitenstein, pp. 5–15 in part 1 of Danish Series of *Sylloge nummorum Graecorum;* also Roussel, *Danmarks Nationalmuseum*, pp. 18–20.

[77] For early catalogs of this cabinet, see Ramus, *Catalogus numorum veterum graecorum et latinorum* (1816); also the *Beskrivelse over danske mynter og medailler* (1791).

[78] For Christina's collection, see Cameli, *Nummi antiqui . . . Christinae reginae* (1690); Haverkamp, *Nummophylacium reginae* (1742); Durand, *Médailles et jetons*, pp. 37–44; Bildt, *Les médailles romaines de Christine* (1908); Gaebler, "Die Münzsammlung der Königin Christina von Schweden" (1906). For numismatics in Sweden before 1640, see Rasmusson, "Mynkunskap och myntsamlande i Sverige före ankring 1640" (1933).

[79] Babelon, *Traité*, vol. 1, col. 152. For the history of the cabinet see Friedlaender and Sallet, *Das königliche Münzkabinet* (1877).

Often mentioned in connection with the Great Elector of Brandenburg is one of the most significant names in the field of numismatics in the 17th century—Ezechiel Spanheim (1629–1710). Swiss by birth, this eminent scholar spent many years in the capitals of Europe. He joined Queen Christina's learned group of friends in Rome and moved in the diplomatic circles of Paris, where for twelve years he was a special envoy (fig. 16) of Frederick William I. His encyclopedic knowledge in history, art, geography, art history—all based on a full mastery of the ancient authors—made him one of the prominent numismatists of his day. His chief publication *Dissertatio de praestantia et usu numismatum antiquorum* (1664) must certainly be considered the work of a master.

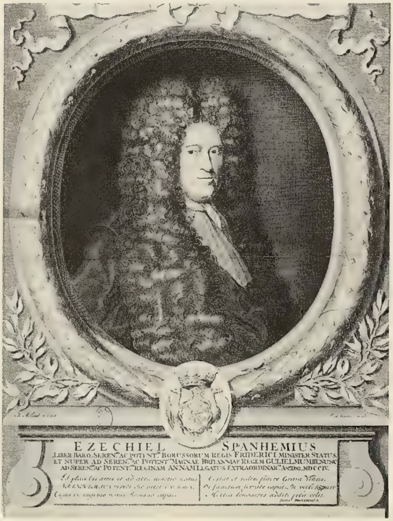
EZECHIEL SPANHEMIUS
LIBER BARO, SEREN.MI AC POTENT.MI BORUSSORUM REGIS FRIDERICI MINISTER STATUS, ET NUPER AD SEREN.AM AC POTENT.AM MAGNAE BRITANNIAE REGEM GULIELMUM III. NUNC AD SEREN.AM AC POTENT.AM REGINAM ANNAM LEGATUS EXTRAORDINAR.S ANNO DNI. MDCCIV.

Fig. 16.—Ezechiel Spanheim (1629–1710), Prussian ambassador to Paris and distinguished numismatist (photo courtesy Bibliothèque Nationale, Paris).

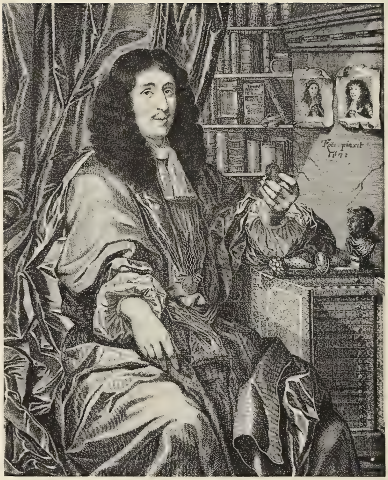

Fig. 17.—Charles Patin, famous French coin collector of the 17th century (photo courtesy Bibliothèque Nationale, Paris).

From Spanheim's notes on his life at the French court should be quoted a passage which casts vivid light on the way in which numismatics and coin collecting were practiced in Paris in the late 1600s. At the home of the Duke of Aumont, Spanheim would meet with a group which can be designated a coin collectors' club, convening weekly to discuss numismatic problems. "They imposed on themselves the task of illustrating Roman history through inscriptions and ancient coins, and in this connection, describing the life of the emperors by assembling all coins struck under their reign. Every member of the group had to discuss the emperor's life and to lecture on it before the gathering in order to benefit from the advice of those present. . . ." [80] Although this was in the full reign of the "siècle des lumières"—that peak of French cultural life when the brilliant conversations of the literary circles, "les salons," of a Mme. de Sevigné, were the model for high society—

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[80] See Babelon, *Traité,* vol. 1, col. 154.

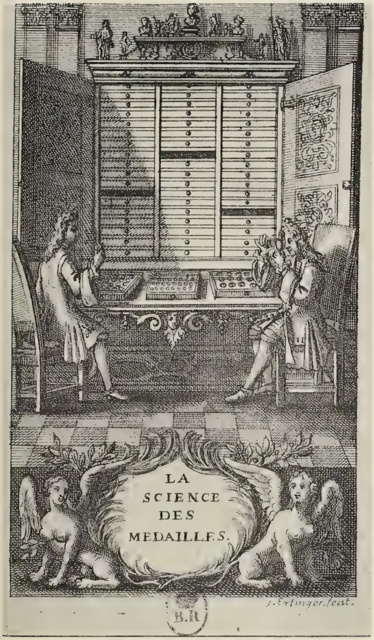

Fig. 18.—TITLE PAGE from Jobert's *La Science des médailles* (photo courtesy Bibliothèque Nationale, Paris).

it is still surprising to learn of the superior standards maintained by the members of this group and the exacting methods used in their discussions. A challenging enterprise indeed, since it succeeded in captivating for two years a man as learned as Spanheim.

In order to promote information of a broader nature, certain authors tried to present a synopsis of, or an introduction to, the entire field of numismatics. A German, Tilemann Friese, certainly made a remarkable attempt in this direction in 1592. While the final three books of his *Müntz-Spiegel* (Coin Mirror) conventionally presented a description of German coinages, his first book established them within the framework of a general theory of coins—an unusual approach for those times. Along similar lines the Jesuit father Louis Jobert's book on the science of coins, *La science des médailles*, served for nearly two centuries as a first-rate reference work (fig. 18). Published first in Paris in 1692, it was re-edited in 1718 in German, in 1728 in Dutch and Italian, and still later in a very popular French edition by Bimard de La Bastille in Paris in 1739.

Even for 17th- and 18th-century man a general conspectus of numismatic publications, as today, was almost impossible. Books and pamphlets of every sort abounded, confusing the untrained person in search of information and rendering serious research for the scholar more and more difficult. As an approach to the problem, bibliographical handbooks which could give a good synopsis of the various specialized publications were compiled during the 1600s. Philipp Labbé's *Bibliotheca Nummaria* (1664) found a follower in B. B. Struve's *Bibliotheca numismatica antiquorum* (1693); both were extensively enlarged by Johann C. Hirsch's *Bibliotheca numismatica*, published almost a century later, in 1760, at Nuremberg.

EIGHTEENTH CENTURY

With the advent of the 18th century—which produced the great cultural revolutions, the French Encyclopedists, Rousseau and Voltaire, Goethe and Kant—a new spirit penetrated all the sciences. The naive curiosity of the past gave way to a more rigorous approach; the casual treatment of materials, often haphazardly accumulated, was replaced by more methodical arrangements; new fields, heretofore completely disregarded or disdained, came into importance. The ancient ideals which had inspired the man of the cinquecento faded away in many instances and were replaced by a more immediate interest in contemporary life. The Elizabethan cultural achievement in England and the brilliant rise of French art and literature during the reign of Louis XIV gave people more confidence in their own creations.

Numismatics, as did so many of the other sciences, benefited from this new trend, and new fields were opened for research. The old system of publishing

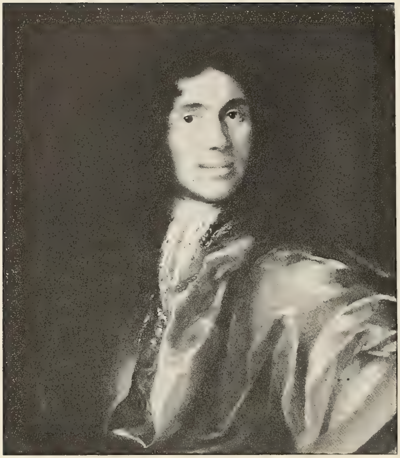

Fig. 19.—Elias Brenner (1647–1717), father of Swedish numismatics, in a painting by Mikael Dahl (1680) (photo courtesy Kungl. Myntkabinettet, Stockholm).

catalogs of great collections was continued but, at the same time, advanced and more specialized studies were given increased attention. The Middle Ages and the contemporary period furnished novel and attractive subjects.

The late 1600s already had witnessed a strong movement in this direction. In France, François Le Blanc's *Traité historique des monnoys de France* (1690); in Sweden, Elias Brenner's *Thesaurus nummorum Sueco-Gothicorum vetustus* (1691);[81] and in Holland, Pierre Bizot's *Histoire métallique de la République de Hollande* (1687) were all remarkable publications representative of the new trends. Their example was followed in practically every leading country in Europe. In Germany during the 1700s there appeared a cluster of authors who treated numismatic problems from the standpoint of individual principalities. An outstanding writer among them was Wilhelm Ernst Tentzel (1659–1707), whose *Saxonia numismatica*, published in four volumes from 1705 to 1714, is still considered a standard reference for Saxon coinages.

A few names, among the many remarkable writers of the 18th century, include: in Switzerland, Gottlieb Emanuel von Haller, author of a work on Swiss coins (*Schweizerisches Münz- und Medaillenkabinet*, 1780–1781); in Spain, Enrique Flórez (*Medallas de las colonias*, 1757–1773); in Italy, Guido Antonio Zanetti (*Nuova raccolta delle monete e zecche d'Italia*, 1775–1789), Prince Gabriele Torremuzza, author of a classic study on the ancient coins of Sicily (*Siciliae populorum et urbium*, 1781), Francesco de' Ficoroni (*Piombi antichi*,

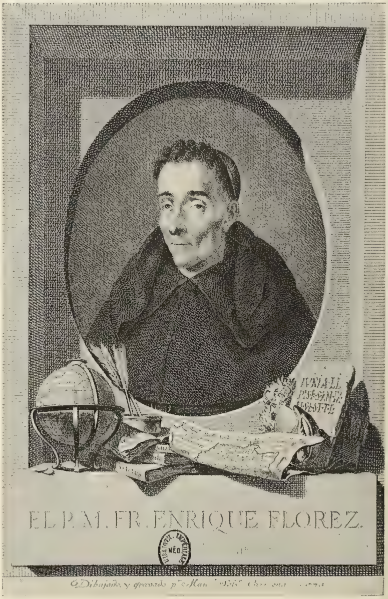
EL P. M. FR. ENRIQUE FLOREZ.

Fig. 20.—Enrique Flórez (1702–1773), Spanish numismatist (photo courtesy Bibliothèque Nationale, Paris).

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[81] Strömbom, "Elias Brenner i unga ar" (1947); Högberg, "Elias Brenner," (1955).

1740), and Lodovico Antonio Muratori,[82] who initiated the study of medieval Italian numismatics (*De diversis pecuniae generibus*, 1738); in France, Nicolas Mahudel[83] (*Dissertation historique sur les monnoyes antiques d'Espagne*, 1725), Joseph Pellerin[84] (*Recueil de médailles de rois*, 1762, and *Recueil de médailles de peuples et de villes*, 1763); and in England, Stephen M. Leake (*Nummi britannici historia*, 1726).

In order to be able to master the continuously growing bulk of contemporary material, with its never-ending number of coins which must be registered, classified, and studied, a new and more adequate system than the alphabetical or chronological arrangement had to be found. The answer to the problem came from the meticulous and systematic minds of the German numismatists, who, during this century, undoubtedly became the leaders in numismatic research.

Since Germany itself presented a rather entangled picture with its numerous principalities, archbishoprics, bishoprics, cities, and even abbeys—all of them issuing coins—any attempt to give a general numismatic history of this country seemed to be an impossible enterprise. A division of numismatic material by coin denominations simplified the task considerably, permitting topics often to expand geographically by including similar coin denominations of other countries. As a result, a group of publications appeared in Germany which presented fairly complete catalogs of specific categories of coins. Johann Friedrich Joachim's *Neu eröffnetes Groschen-Cabinet* (1749–1769), on German and other small denominations, Johann Tobias Köhler's *Vollständiges Ducaten-Cabinet* (1759–1760), and later J. C. von Soothe's *Auserlesenes und höchst ansehnliches Ducaten-Kabinet* (1784), became major references on European gold coins. Michael Lilienthal's *Vollständiges Thaler-Cabinet* (1735), and especially David Samuel Madai's *Vollständiges Thaler-Cabinet* (1765–1774), which included practically all dollar-sized silver coins of Germany and neighboring countries, are excellent reference books still used extensively at the present time.

During the same period, various numismatic dictionaries were published for the purpose of helping collectors become more familiar with the basic concepts and terminology of the science. Deserving mention, among others, are Johann Christoph Rasche's *Lexicon universae rei numariae veterum* (1785–1805), in 9 volumes, with a supplement in 1802–1805, in Leipzig; and the work of the Spanish numismatist Tomás Andrés de Gusseme, *Diccionario numismático general*, which was published in six volumes (1773–1777) in Madrid.

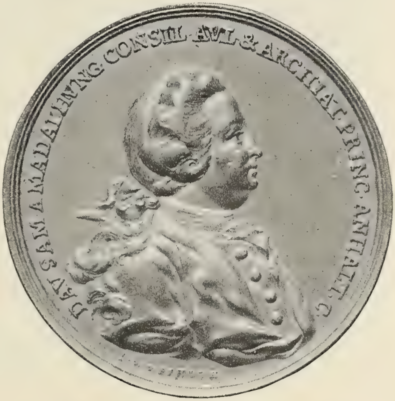
DAV. SAM. A MADAI HUNG. CONSIL. AUL. & ARCHIAT. PRINC. ANHALT. C.

Fig. 21.—David Samuel Madai (1709–1780), German numismatist (Div. of Numismatics photo).

The early years of the 18th century also saw the recognition of numismatics as an academic discipline. In 1738 Professor Johann Heinrich Schulze announced a *collegium privatum* at the University of Halle, Saxony, lecturing *über die Münzwissenschaft und die daraus zu erläuternden griechischen und römischen Altertümern* (on the science of numismatics as a source for Roman and Greek antiquities).[85] This course was published later (Halle, 1766) in book form.

From 1729 to 1750, Professor Johann David Köhler of Altdorf published weekly commentaries and historical explanations—on national and foreign coins and medals—in a series he called *Historische Münz-Belustigung* (Historical Coin Amusement). Precursors in the late 17th century were Tentzel's

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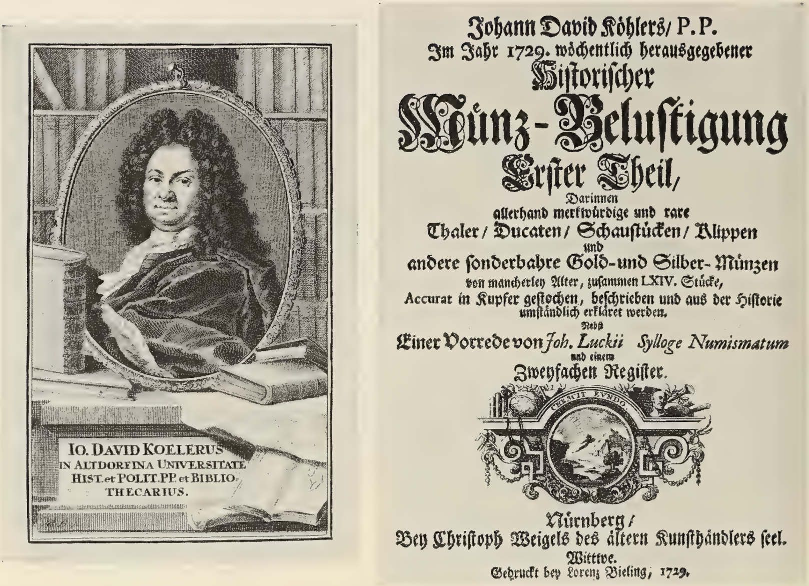
[82] For a biography of Muratori, see Luppi, "Vite di illustri numismatici italiani: Lodovico Antonio Muratori" (1889).

[83] A list of his works is in Babelon, *Traité*, vol. 1, col. 172.

[84] A list of his publications is in Babelon, *Traité*, vol. 1, cols. 176–177.

[85] Koch, "Aus der Geschichte des Robertinum" (1944).



Johann David Köhlers/ P.P.
Im Jahr 1729. wöchentlich herausgegebener
Hiſtoriſcher
Münz-Beluſtigung
Erſter Theil,
Darinnen
allerhand merkwürdige und rare
Thaler/ Ducaten/ Schauſtücken/ Klippen
und
andere ſonderbahre Gold-und Silber-Münzen
von mancherley Alter, zuſammen LXIV. Stücke,
Accurat in Kupfer geſtochen, beſchrieben und aus der Hiſtorie
umſtändlich erkläret werden.
Nebſt
Einer Vorrede von *Joh. Luckii Sylloge Numismatum*
und einem
Zweyfachen Regiſter.

Nürnberg/
Bey Chriſtoph Weigels des ältern Kunſthändlers ſeel.
Wittwe.
Gedruckt bey Lorenz Bieling, 1729.

Fig. 22.—Frontispiece and Title Page from the early numismatic periodical *Historische Münz-Belustigung*, published by J. D. Köhler (Div. of Numismatics photo).

Monatliche Unterredungen (Leipzig, 1689–1698) and the *Historische Remarques der neuesten Sachen in Europa* (Hamburg, 1699–1705). Adorned with artistic engravings of coin and medal designs, Köhler's publication is a real treasure chest of information, and even today it constitutes delightful reading for the numismatist and historian (fig. 22). The two-volume index, compiled by Johann Gottfried Bernhold in 1764–1765, contains a complete key to the 22 volumes. Köhler's "periodical" stimulated many imitators in Nuremberg as well as other places.[86]

A survey of numismatics during the 18th century would be incomplete without mentioning the noted Austrians, Joseph Eckhel and Joseph von Mader.

The Abbot Joseph Hilarius Eckhel (1737–1798),[87] who was director of the Imperial Coin Cabinet in Vienna and, at the same time, taught classical archeology at the University, devoted his entire life to the study of ancient coins. No one more deserves the title of "father of ancient numismatics." On the basis of his principles—applied in the arrangement of his major work, *Doctrina nummorum veterum*, published in eight volumes between 1792–1798 in Vienna—rests the subsequent organization of the entire field of ancient numismatics.

A merciless critical faculty which weeded out faulty interpretations and apocryphal data, a brilliant ca-

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[86] For further information, see Luschin von Ebengreuth, *Allgemeine Münzkunde*, p. 12.

[87] For a biography of Eckhel, see Kenner in *Allgemeine deutsche Biographie*, vol. 5; Franke in *Neue deutsche Biographie*, vol. 4; see also Bergmann, "Pflege der Numismatik in Österreich" (1857); Durand, *Médailles et jetons*, pp. 60–64.

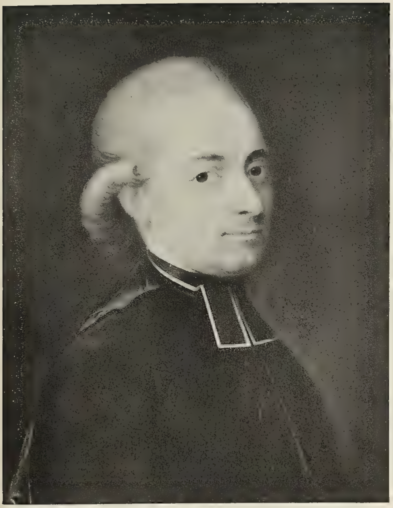

Fig. 23.—The Austrian Abbot Joseph Hilarius Eckhel (1737–1798), father of ancient numismatics (photo courtesy Kunsthistorisches Museum, Vienna).

pacity for synthesis which visualized the general outlines of ancient coinage in its magnitude, a methodical mind which established the basic principles on which to build a flawless scientific arrangement—these are Eckhel's outstanding characteristics. With him began a new era in the study of ancient numismatics: rigid scientific methods entered the field of research, supplanting the casual approach of the amateur with his haphazard search for answers.

"Prolegomena generalia," the first 24 chapters of volume one in his *Doctrina nummorum*, can be considered a basic introduction to numismatics. For the first time in its history the basic elements of ancient Greek and Roman numismatics—metals, ponderal systems, organization of mints, significance of coin-types, coins in their relation to the history of art—are amply discussed. In dealing with ancient Greek numismatics (in the first four volumes of his work), Eckhel adopted a geographical arrangement instead of the alphabetical grouping generally in use up to his time. This system, previously advocated by the French collector and scholar Joseph Pellerin [88] but never worked out in detail, remains the foundation of Greek numismatics to the present day. Modern scholars also follow Eckhel in other respects: many of his findings or attributions have never been questioned. In the field of Roman numismatics, to which he devoted the last four volumes of his *Doctrina nummorum*, Eckhel systematized an immense treasure house of information, setting up a scientific, chronological sequence of coin issues in a basic arrangement which has not essentially altered during a hundred and fifty years of numismatic work.

Although his fame cannot compare with Eckhel's, Joseph von Mader [89] (1754–1815), professor at the University of Prague, must be considered equally a pioneer in his own field. He succeeded in putting onto a scientific basis medieval numismatics, which until then had not progressed beyond the preparatory phase of random listings. His "essays" on bracteates, *Versuch über die Brakteaten* (1799), *Zweiter Versuch über die Brakteaten* (1809), and especially his six-volume *Kritische Beiträge zur Münzkunde des Mittelalters* (1803–1813) changed the basic approach to this field of study.

FAMOUS COLLECTIONS OF THE CENTURY

At this point a brief survey of the major cabinets in Europe during the 18th century will disclose not only information about the growth of important museum collections but also facts about numismatics as a favorite pastime of the intellectual elite.

It is only natural that Italy, the perpetual source of antiquities, should account for some of the outstanding collections of coins. Here, as in other leading countries of Europe, countless personages of renown in the social pages or in the world of letters and science, collected, exhibited, studied, and discussed coins. A deeply felt love for art and art objects and a genuine understanding for historical and scientific problems inspired Italian collectors. The dukes of Tuscany [90] and the princely families, the Chigi, the Colonna, the Barberini, the Pamphili, all had their art treasures. Names such as Prince Livio Odescalchi, Cardinal Massimi, Cardinal Albani, Prince Borghese, Prince

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[88] Babelon, *Traité*, vol. 1, cols. 176–177.

[89] Bergmann, "Pflege der Numismatik in Österreich" (1863), p. 33.

[90] Gori, *Antiqua numismata . . . in regio thesauro Magni Ducis Etruriae adservantur* (1740).

Torremuzza, Monsignor Stefano Borgia, Ferdinando Cospi of Bologna, Manfredo Settala of Milan, Geronimo Correr, and Honorio Arigoni of Venice,[91] are only a few among an impressive group of people who were moved for various reasons to treasure coins. Many of their collections—varied or highly specialized, modest or excessively wealthy—have disappeared, their treasures scattered without a trace. Others were transmitted practically untouched to later generations, their records in perfect order. As a result, many famous pieces today can be traced to their original ownership, some as far back as two centuries.

Of special interest is the history of the Vatican Coin Cabinet. After a slow start during the 16th and 17th centuries, the development of the cabinet took an unexpected turn upward in the late 1700's. Pope Clement XII (1730–1740) envisioned an outstanding museum which would give artists and visitors to Rome occasion to see great works of art. As part of the collections he visualized also a group of Roman coins. Accordingly, in 1738 he bought from Alessandro Cardinal Albani a remarkable group of 328 Greek and Roman coins and medallions, paying the impressive sum of 11,000 scudi.[92] These coins, highly regarded by his contemporaries, were housed in the north wing of the newly constructed papal library; they formed substantially the nucleus of the Vatican Coin Cabinet. His successors, especially Benedict XIV (1740–1758), Clement XIV (1769–1774), and Pius VI (1775–1799), spared neither efforts nor money to add new treasures. In addition to the Roman coins and the rare medalions in which this collection was remarkably rich, a very good representative series of the Roman popes was added.

Pius VI surpassed his predecessors in enriching the Vatican Coin Cabinet. In 1794 he bought for 20,000 scudi the famous cabinet of Queen Christina of Sweden, a collection by then in the possession of the Odescalchi family. Within the short span of a few decades the popes succeeded in bringing their collection to the highest level, equal almost to the Paris Royal Cabinet. Unfortunately, within a few years many of these exceedingly rare pieces were scattered forever by a turn in history.

In 1799, during the French occupation of Rome, innumerable coins were seized by individual soldiers of the French revolutionary army. Only a part of the original Vatican Cabinet could be transported to Paris according to the plans of the *Directoire* in Paris. Count Camillo Serafini gives a detailed account of these events and concludes the story of the regrettable happenings with the observation that "it could be truly said that the cabinet did not exist anymore." [93] The Vatican collections, however, were rebuilt in later years.

It was only natural during this period of enlightenment, when art and science were benefiting greatly from the impulses emanating from France, that most of the potentates of Europe would pay attention to one of the most intellectual of aristocratic pastimes. Indeed, Frederick the Great of Prussia, Louis XV of France, Maria Theresa of Austria, her husband Charles VI, Duke Anthon Günther of Schwarzenberg, and Frederick II of Saxe-Gotha competed among themselves for the acquisition of entire collections or of famous single pieces. Charles VI carried his numismatic fervor so far that he did not want to be separated even during military campaigns from some of his favorite coins. Accordingly, he had a portable coin case made which accompanied him on to the battlefields of Spain.

This period holds a special importance for the growth of the Vienna Coin Cabinet, which by 1663 numbered over 15,900 pieces. Numismatics was cultivated at the Viennese court during the reign especially of Joseph I, Charles' older brother. In 1709 the emperor brought the Swedish scholar Carl Gustav Heraeus (1671–1725) from the court of the Princes of Schwarzenberg. After Joseph's death in 1711, Heraeus continued his services with Charles VI, who entrusted him with the task of integrating the rather scattered coin holdings of the Viennese "Schatzkammer." [94] Heraeus not only organized the Vienna coin cabinet but also substantially increased its treasures. Enjoying the financial and moral support of the numismatically inclined emperor, Heraeus purchased many rarities on his numerous travels. In 1713 he added to the Vienna Cabinet 1,200 select pieces from the Ambras collection in the Tyrol. About the same time, the scholarly dissertations on ancient coins by Father Erasmus Froehlich (1700–1758),[95] librarian and professor of archeology, added

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[91] *Numismata . . . Musei Honorii Arigoni Veneti ad usum juventutis rei nummariae studiosae* (1741).

[92] VENUTI, *Antiqua numismata . . . ex museo Alexandri S.R.E. Card. Albani in Vaticanam Bibliothecam . . .* (1739–1744).

[93] *Monete del Medagliere Vaticano*, vol. 1, pp. L–LI.

[94] BERGMANN, "Pflege der Numismatik in Österreich" (1856), pp. 32–34.

[95] For a bibliography of his works, see BABELON, *Traité*, vol. 1, cols. 169–170.

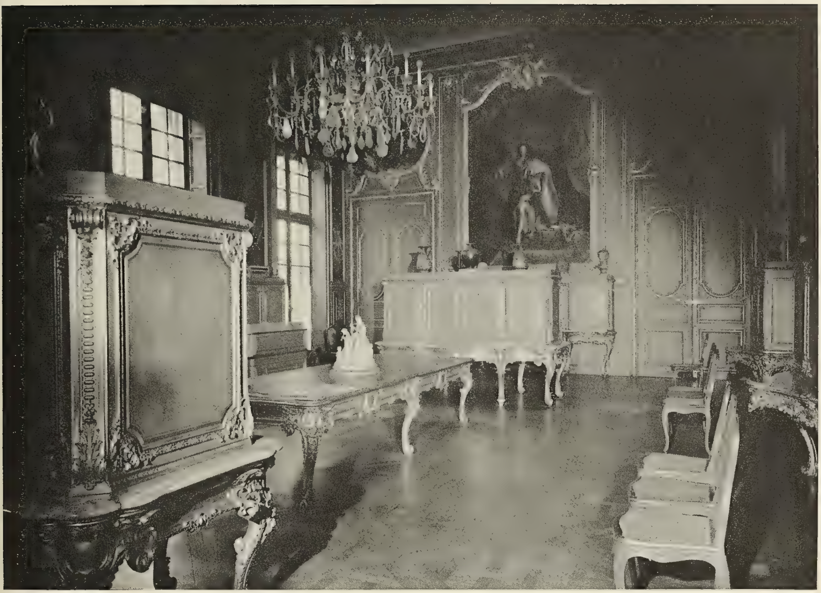

Fig. 24.—"Cabinet Louis XV" at the Cabinet des Médailles in Paris (photo courtesy Bibliothèque Nationale).

to the prestige of Austrian numismatics. Another collection of repute, during the reign of Charles VI, was the coin cabinet of Apostolo Zeno of Venice, historian to the Emperor. This famous collection of ancient Greek and Roman coins passed in 1747 to the monastery of St. Florian in Upper Austria, where it remained for over two hundred years until it was sold at auction in Vienna after World War II. During the Napoleonic era, the Austrian chancellor Metternich built a comprehensive collection of coins and medals in his Königsberg Castle.

In France, Louis XV continued only half heartedly the interest which the Sun King had shown for coins. After 1720 the royal cabinet [96] was transferred from Versailles to Paris and set up in a lavish arrangement in the library of the king in the ancient palace of the Marquise de Lambert, where it can be seen in its original setting to this day (figs. 24, 25).

The little principality of Saxe-Gotha could claim an important collection which had been assembled by its princes (fig. 26). Frederick II (1691–1732) proclaimed that he created this cabinet "for the reputation of Our Princely House, and for the good of the public." [97]

Among the instructions given in 1744 by his successor Frederick III to Prof. Schlaeger, curator of the collection, the following seems perfectly to define curatorial duties: "The curator is supposed to show

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[96] J. Babelon, *Les trésors du Cabinet des antiques* (1927); see also *Cabinet des médailles . . . guide du visiteur* (1924; 1929).

[97] Pick, "Die Münzkabinette" (1920); see also the contemporary catalog of Liebe, *Gotha numaria* (1730).

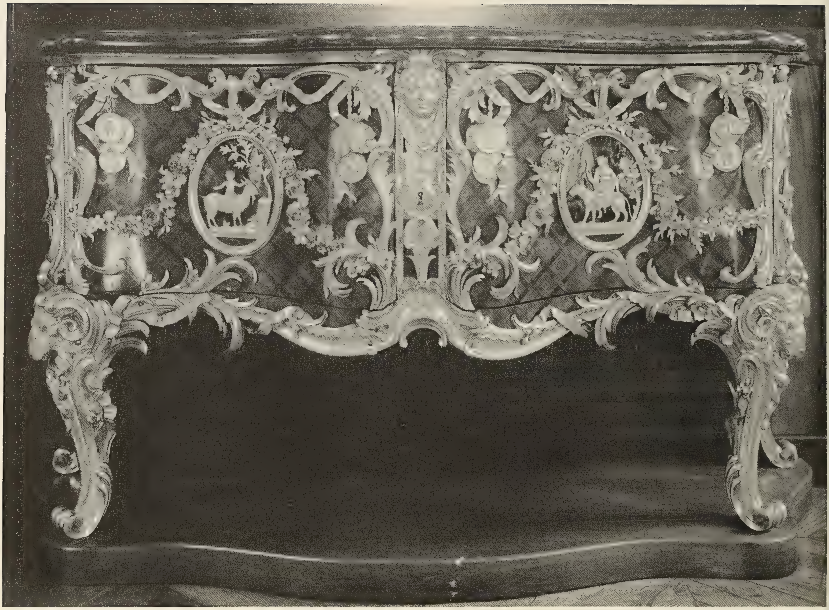

Fig. 25.—Coin Cabinet of the time of Louis XV, preserved at the Cabinet des Médailles, Paris (photo courtesy Bibliothèque Nationale).

the collections in a courteous manner, without asking for any remunerations, to all strangers who can view them profitably; he should also entertain them with helpful lectures and bring forward everything which he knows is in Our intention and what he might consider of interest to the public." [98]

It is interesting to note that already at this time Germans were anxious to give general directives to collectors. In 1762 Johann David Köhler published, for travelers and scientists, instructions on profitably viewing coin cabinets, galleries, etc.: *Anweisung für Reisende . . . Münz-Cabinette . . . mit Nutzen zu besehen* (1762). Neickel in his handbook on museums also tried to define a triple scope in coin collecting. He advised collectors to gather only "genuine originals," avoiding copies, to select specimens of perfect striking, and, as the ultimate goal, to assemble coins and medals in such a manner that they could tell a story.[99]

Across the Channel, the first catalog of the British Museum's collection was published by an Italian, Nicola Francesco Haym, under the title *Del tesoro britannico* (1719–1720). This two-volume work appeared at the same time in Latin and English, as well as Italian.

A few decades later the British cabinet was enlarged considerably by the addition of the collection of Sir Hans Sloane, an Irish physician to Queen Anne and King George I. The collection of over 32,000 pieces

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[98] Pick, "Die Münzkabinette" (1920); see also his *Das Herzogliche Münzkabinett* (1933)

[99] Neickelio, *Museographia*, p. 3.

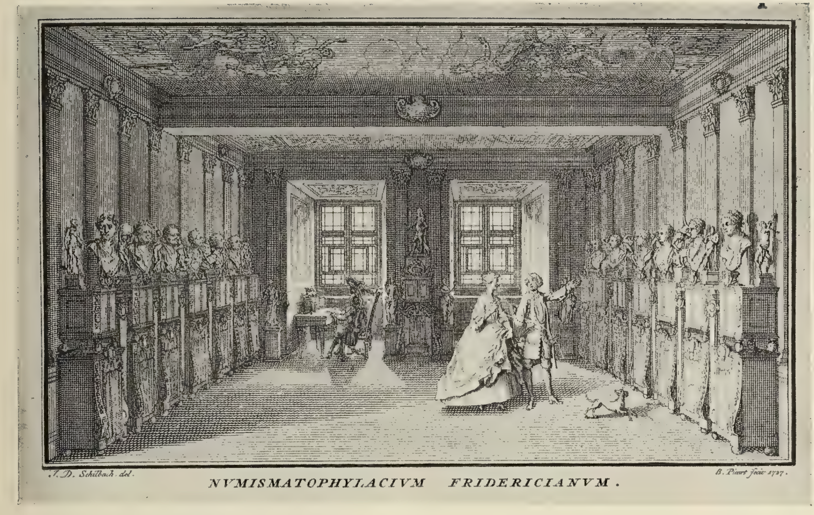
J. D. Schilbach. del.
NVMISMATOPHYLACIVM FRIDERICIANVM.
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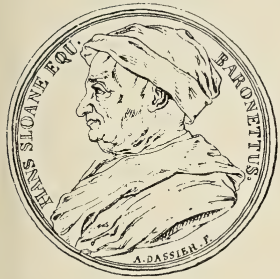
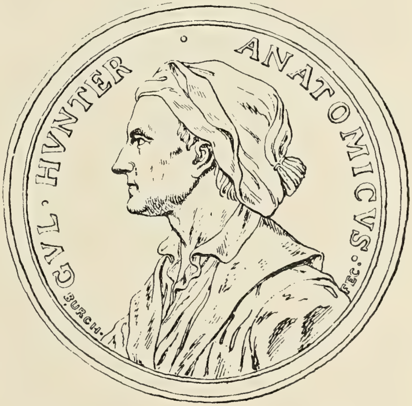
Fig. 26.—The Coin Cabinet of Frederick II (1691–1732) of Saxe-Gotha (photo courtesy Bibliothèque Nationale).


HANS SLOANE EQU: BARONETTUS.
A.DASSIER.F.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BURCH. FEC.

Fig. 27.—Sir Hans Sloane (1660–1753), famous Irish coin collector, and Dr. William Hunter (1718–1783), founder of the coin cabinet at the University of Glasgow (drawings from Durand).

was added to an earlier bequest from Sir Robert Cotton which had been donated to the state in 1710. Both formed the nucleus of what was to become the most famous coin collection in the world.[100] This collection and others, such as the substantial bequest of Dr. William Hunter to the University of Glasgow [101] or the coins of Dr. Richard Mead (which were listed in a sale catalog, *Museum Meadianum*, 1755), of John Swinton, and of Horace Walpole, helped place England among the leading nations in numismatics.

EARLY NINETEENTH CENTURY

The turbulence and insecurity created by the French Revolution and the Napoleonic wars left little leisure and understanding for any kind of diversion, and, as a result, coin collecting declined for a brief period of the new century in many European countries. Yet, from this dormant situation an awakening soon came, generated in France by Napoleon's own grandiose plans. Deliberate pursuit of ancient ideals and art concepts, as conveyed in the art of David and Canova, combined with a strong feeling for national grandeur, found expression in innumerable medals which were struck during Napoleon's time.

Numismatic literature in the subsequent years clearly reflected these tendencies. Two imposing works of French medallic art, Michel Hennin's two-volume *Histoire numismatique de la révolution française* (1826) and the twenty-volume *Trésor de numismatique et de glyptique* (1834–1858), both devoted largely to the Revolution and to Napoleon, were published within these decades. Related to such works was Gerard van Loon's *Histoire métallique des XVII provinces des Pays-Bas*, which had been published almost a century earlier (1732–1737) and now was reedited in the early 1800s.

A remarkable figure in numismatics at the turn of the century was the Frenchman Theodore-Edme Mionnet (1770–1842), who joined the *Cabinet des Médailles* in 1795. Strongly influenced by the classical tendencies of his age, he pursued ideals of disseminating knowledge of ancient coins among wider circles as well as assisting artists in their work by giving them the opportunity to obtain relief reproductions of artistic coins. His sulphur-paste copies of the latter found a wide acceptance; at the same time, he published descriptions of the type, history, and rarity of these coins. Eventually the publications grew into a considerable work, *Description des médailles antiques grecques et romaines avec leur degré de rareté et leur estimation*, published between 1806 and 1813 in six volumes with an additional volume of plates. The *Supplément*, in nine volumes, was issued between 1819 and 1837. In this largest publication (up to that time) on Greek coins, Mionnet succeeded in describing over 52,000 pieces. Although the work is not flawless and its scholarly standards are lowered by a continuous preoccupation with establishing the commercial value of coins, it still remains, through its wealth of information, an invaluable reference.

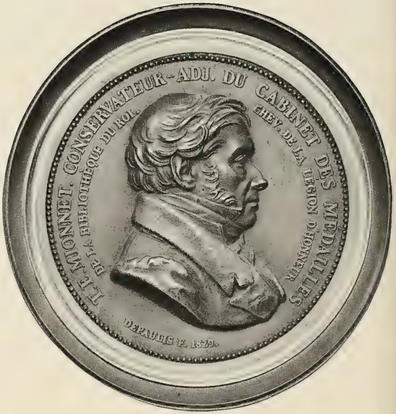
T. E. MIONNET. CONSERVATEUR-ADJT. DU CABINET DES MÉDAILLES
DE LA BIBLIOTHÈQUE DU ROI.
CHEV. DE LA LÉGION D'HONNEUR
DEPAULIS F. 1829.

Fig. 28.—Theodore-Edme Mionnet (1770–1842) of the Cabinet des Médailles, Paris (photo courtesy Bibliothèque Nationale).

Mionnet's contemporary, the Italian Abbot Domenico Sestini (1750–1832), a well-known traveler and naturalist from Florence, published, among many titles, catalogs of various coin collections which he had visited during his travels, such as *Lettere e dissertazioni numismatiche* (1813–1820) and *Descrizioni d'alcune medaglie greche* (1822–1829). Although his numerous works do not achieve the high standard of Eckhel's publications, they remain useful to present-day numismatists.[102]

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[100] Mattingly, "British Museum" (1949); Walker, "Early History of Department of Coins and Medals" (1953); Boulton, *The Romance of the British Museum* (n.d.).

[101] For the history of the Glasgow collections, see Macdonald's catalog *Greek Coins in the Hunterian Collection*, vol. 1, pp. ix–lxvi; for an earlier catalog, see Combe, *Nummorum veterum* (1782).

The trend toward publishing catalogs of large private and public collections became more widespread. For the beginning of the century we should note a few significant publications in this field, such as Taylor Combe's catalog of the British Museum collection, *Veterum populorum et regum numi qui in Museo Britannico adservantur* (1814), and especially Christian Ramus' catalog of the Copenhagen collection, published in two volumes, *Catalogus numorum veterum Graecorum et Latinorum musei regis Daniae* (1816). In addition, Louis Haller published in 1829 in Bern the catalog of the numismatic collection of the Bern museum: *Catalogus numismatum veterum, Graecorum et Latinorum . . . quae extant in museo civitatis Bernensis.*

While the growth of many public collections in central Europe was hindered by wars and revolutions, Italy, and especially southern Italy, succeeded in increasing the number of its collections. The coin cabinet of Naples,[103] formed in 1757, grew rapidly—due in part to the archeological excavations in the surroundings of Naples—to an inventory of about 10,000 Greek and over 16,000 Roman coins. In the same city at the same time the Santangelo Collection could claim an equal number of ancient coins. In 1865 this collection was purchased by the city of Naples and added to its own coin cabinet in the national museum. Between 1866 and 1871 the important holdings in ancient and medieval coins of this museum were cataloged by Giuseppe Fiorelli.[104] In numismatics, Naples by this time had developed a great tradition, which has remained unchanged to the present day. Here, in 1808, Francesco Maria Avellino began the publication of a numismatic periodical, *Giornale numismatico*, which followed only a few years behind Friedrich Schlichtegroll's earlier attempt, *Annalen der gesammten Numismatik* (issued in Leipzig and Gotha between 1804 and 1806).

In 1822 Archduke Maximilian donated to the city of Modena—from whence the Renaissance cabinet of the Dukes of Este [105] had disappeared—a collection which, by 1845, could claim over 35,000 pieces. Venice, with one coin cabinet in the library of St. Mark and another in the Museo Correr, Parma with a coin cabinet founded in 1740, the Brera Collections in the Castel Sforzesco in Milan,[106] large and small public coin collections in Turin,[107] Florence,[108] Padua, Palermo, Catania, and Syracuse, all bear evidence of the tribute generally paid to numismatics in Italy not only by rulers but also by private citizens.

Such interest was no less intense on the Iberian peninsula. Spain possessed a coin cabinet which had been formed in Madrid under King Philip V (1700–1746). By 1716 this collection numbered over 20,000 pieces. It was increased substantially through acquisitions made because of the personal initiative of Ferdinand VI (1746–1759) and especially of Charles III (1759–1788), who was instrumental in bringing many antiquities from Naples to Madrid. The royal collection later was transfered to the Museo Arqueológico in Madrid. Another collection in Madrid, in the Real Academia de la Historia, which had been gathered during the 18th century, two important coin cabinets in Barcelona, one at the University of Valencia, as well as many important private collections—all attest to the importance accorded to numismatics in Spain.

In Portugal, the creation of the Academia Portuguesa da Historia in 1720 designates a new era in Portuguese numismatic research. Under the stimulus of an increased interest in archeological and historical studies, coins were collected and studied more systematically. Many major Portuguese coin collections were formed, or were mentioned as already existing, in the late 1800s. Of such were the Museu Maynense, begun by the Jesuit José Mayne (d.1792), the collection of the royal palace of Ajuda, mentioned in a Lisbon Almanac for 1795, and especially the Museu da Casa da Moeda, organized in 1777 by a decree from the famous Portuguese statesman Marquis de Pombal. His instructions to the mint to keep one specimen of each issue brought the mint museum into existence. Other collections, especially those pertaining to classical coins, were formed, probably as educational material, in libraries and universities such as Coimbra and Oporto.[109]

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[102] For a list of his works, see Babelon, *Traité*, vol. 1, cols. 195–197; Leitzmann, *Bibliotheca numaria*, pp. 129–130.

[103] Breglia, "Le collezioni monetali del Museo Nazionale di Napoli" (1960).

[104] Fiorelli, *Catalogo del Museo Nazionale di Napoli* (1866–1871).

[105] Panvini Rosati, "Il riordinamento del Medagliere Estense di Modena" (1956).

[106] Belloni, "Il Medagliere di Milano al Castello Sforzesco" (1955).

[107] Fabretti, *Regio Museo di Torino* (1881–1888).

[108] Supino, *Il medagliere mediceo* (1899).

In St. Petersburg were the impressive collections of the Hermitage, established during the reign of Catherine II (1762–1796). Earlier, Peter the Great (1689–1725) had been known for his cabinet of antiquities, which included numerous ancient coins and several hundred contemporary medals.[110] In his endeavor to raise Russia to the cultural level of other European countries, Peter encouraged the collection of historic and artistic objects. By personal order of the Tsar in January 1722 all Russian coins prior to his reign were to be confiscated from churches, monasteries, and wealthy noblemen and incorporated into the palace collection. (Only the treasures of the Kiev-Petcher monastery remained hidden from Peter; they were discovered in the late nineteenth century.) In 1728, after Peter's death, his collection was desposited for safekeeping with the *Kunstkamer*, where it was added to collections left in earlier years by Russian noblemen, such as the early Russian coins of the boyar Peter S. Saltykov, Governor of Kazan. In 1742 the holdings of over 28,000 coins of the *Kunstkamer* were described in an illustrated catalog written in both Russian and German.

Many other important coin collections were assembled in Russia during the late 18th and early 19th centuries. The well-organized cabinet of Count Andrei I. Osterman (1686–1747), the most famous Russian statesman during the first half of his century, contained, in addition to outstanding Russian rarities, an important series of Chinese coins. This collection was incorporated into the *Kunstkamer* while the cabinet of Count A. P. Volynsk, which included numerous Asiatic and European coins, was given in 1740 to the Academy of Science.[111]

During the middle of the 19th century, a German, Bernard von Koehne (1817–1885), who acted as a curator of the Hermitage, published a journal, *Mémoires de la Société d'Archéologie et de Numismatique de St. Petersbourg* (1874–1852). His special field of attention was the ancient coinage of the Black Sea region. I. G. Spasskii, in his "Notes on the History of Russian Numismatics" [112] asserts that Aleksandr D. Chertkov's earlier work on Russian coins, *Opisanie drevnikh Russkikh monet* (1834–1842), can be considered the first scientific publication in the field of Russian numismatics. In the same period, Baron Stanislav de Chaudoir published a three-volume handbook of Russian coins which is still used, *Aperçu sur les monnaies russes et sur les monnaies étrangères qui ont eu cours en Russie* (1836–1837).

Fig. 29.—Aleksandr Dmitrievitch Chertkov (1789–1858), Russian numismatist (photo courtesy the Hermitage, Leningrad).

Many rare pieces, especially in the ancient field, were purchased for the Russian cabinets. Large and widely diversified collections, containing local finds of ancient coins from the Greek colonies on the shores of the Black Sea, sprang up in southern Russia. Especially noteworthy were the cabinets in the Odessa

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[109] Batalha Reis, "Museus e colecções públicas" (1946).

[110] See Bieliaev, *Kabinet Petra Velikago* (1800).

[111] Spasskii, "Ocherki po istorii russkoï numizmatiki," pp. 40–42, 52–77.

[112] Ibid.

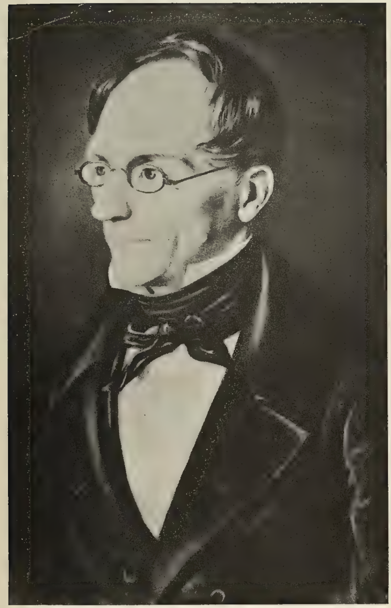

Fig. 30.—Baron Stanislav de Chaudoir (1791–1858), Russian numismatist (photo courtesy the Hermitage, Leningrad).

museum, in Kerch, and at the University of Kiev. Another university collection could be found as far east as Kazan.[113]

The early decades of the 19th century can be considered a preparatory phase for the increasingly scientific direction which numismatics took in the later 1800s. More and more, renowned private collections were incorporated, by donation or purchase, into the large collections of the public museums, where they were tended by skilled specialists. From the distinguished ranks of the latter came many of the outstanding contributions to numismatic research. Often associated with learned circles of universities, these men brought into numismatics the accuracy of scholarly methods, a wide knowledge, and the astuteness of scientifically trained minds. Due to their influence, even the so-called dilettantes and amateurs in the field were induced to follow more careful methods, as can be seen in the papers published at the time. This trend of channeling numismatic interest along more scientific lines reached its full development toward the end of the century, but, its sporadic beginnings had already been registered in the first half of the 1800s.

Usually 1836 is considered a significant date in the development of numismatic science. In that year two periodicals were started which for over a century attracted the most distinguished numismatists of the time and set the highest standards in research. In Paris *Revue numismatique* was founded by Étienne Cartier and Louis de La Saussaye, who intended chiefly to publish articles on Gallic coinages but eventually included ancient and modern numismatics in their program. In London appeared the *Numismatic Journal;* begun by John Yonge Akerman, its name was changed in 1838 to *Numismatic Chronicle.* Four years later, Belgium followed with the *Revue de la numismatique belge*, founded by R. Chalon, C. Piot, and C. P. Service, a periodical which in 1875 changed its name to *Revue belge de numismatique.*

These three periodicals had, in fact, been preceded by several German publications of a less permanent character. J. Leitzmann's *Numismatische Zeitung* was issued in Weissensee, Thuringia, from 1834 to 1863. Hermann Grote's *Blätter für Münzkunde: Hannoversche numismatische Zeitschrift* was published in Leipzig from 1835 to 1844 and continued as *Münzstudien* from 1857 to 1877. In Berlin, Bernard von Koehne published *Zeitschrift für Münz-, Siegel- und Wappenkunde* from 1841 to 1846 and from 1859 to 1862; it was continued from 1863 to 1873 as *Berliner Blätter für Münz-, Siegel- und Wappenkunde.* Although their pages carried interesting contributions, these earlier German periodicals were of a rather limited influence. The leading German and Austrian revues—*Zeitschrift für Numismatik* and *Numismatische Zeitschrift*—followed within a few years.

Associated with these periodicals were some of the most renowned names in numismatics. In France, which retained its place among the leading nations in the field, there were: Baron Pierre-Philippe Bourlier d'Ailly (1793–1877), whose Roman Republican coins, the largest collection of its kind in existence,[114] went to the Paris Cabinet des Médailles;

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[113] Beresine, *Cabinet numismatique de l'Université impériale de Casan* (1855).

[114] d'Ailly, *Recherches sur la monnaie romaine depuis son origine jusqu'à la mort d'Auguste* (1864–1869).

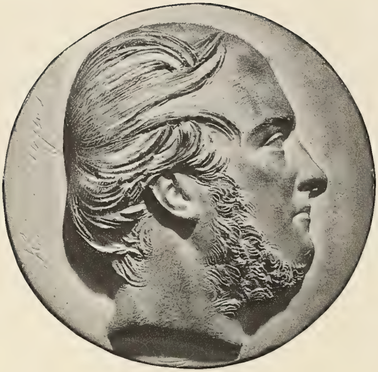

Fig. 31.—Honoré d'Albert, Duc de Luynes (1802–1867), famous French collector and author (photo courtesy Bibliothèque Nationale, Paris).

Duc Honoré de Luynes (1802–1867), one of the founders of the Institut d'Archéologie in Rome and an outstanding scholar, whose collection of almost 7,000 Greek coins, which he gave to the Paris cabinet, was later published by Jean Babelon;[115] Louis Charles, Duc de Blacas, who translated Theodor Mommsen's history of Roman coinage into French between 1865 and 1875; and Henri Cohen (1806–1880), librarian at the Cabinet des Médailles, who produced in his *Médailles imperiales* (1859–1868) the most popular handbook on Roman imperial pieces. The latter's simple method of arranging the coins alphabetically by reverse legends under their respective emperors made this catalog very easy to use by a wide public, even to the present day.

By midcentury, France produced scores of collectors and scholars well versed in ancient and medieval numismatics. Félicien de Saulcy (1807–1880), author of *Numismatique des croisades* (1847) and of various studies on Byzantine and Gallic numismatics, was also known as a collector; his 7,000 Gallic coins were donated to the Paris Cabinet. Faustin Poey d'Avant, with *Les monnaies féodales de la France* (1858–1862), became the leading authority on the feudal coinage of France; Justin Sabatier (1792–1870), in *Monnaies byzantines* (1862), produced what still is an indispensable work on Byzantine numismatics.

Following similar traditions, but with a special emphasis on medieval and modern times, Belgium and the Netherlands produced names like Constant Antoine Serrure (1835–1898), Raymond C. Serrure (1863–1899), Prosper D. Mailliet (1808–1886) (with the best publication on obsidional coinages, *Catalogue déscriptif des monnaies obsidionales et de nécessité*, 1868–1873), Pieter Otto van der Chijs (1802–1867), director of the coin cabinet of the University of Leyden (with his *De munten der Nederlanden*, 1851–1866), and P. Verkade (with a numismatic history of the Netherlands, *Muntboek bevattende de namen en afbeeldingen van munten*, 1848). The coin cabinet in Brussels, founded in 1830, within a few decades claimed outstanding rarities. In the Netherlands the group of coins at the University of Leyden and especially the cabinet in The Hague[116] were the major collections.

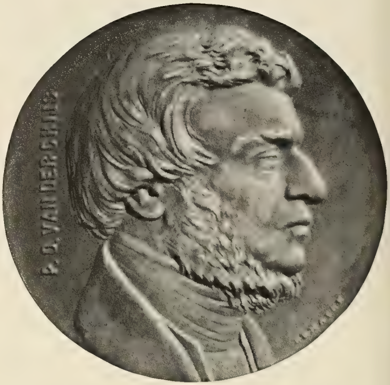
P. O. VAN DER CHIJS

Fig. 32.—Pieter Otto van der Chijs (1802–1867), Dutch numismatist and director of the cabinet at the University of Leyden (Div. of Numismatics photo).

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[115] *Catalogue de la collection de Luynes: Monnaies grecques* (1924–1936).

[116] See the catalog by Dompierre, *Choix de monnaies et médailles* (1910); also Gelder, "Les fonctions externes du Cabinet des Médailles de La Haye" (1957).

In England Reginald S. Poole (1832–1894), keeper of the cabinet in the British Museum, initiated its great series of coin catalogs. At the same time Col. William M. Leake (1777–1860), whose 12,000 Greek coins were purchased by the University of Cambridge in 1864, published the catalog of his collection under the title *Numismata Hellenica* (1856).[117] In 1883 Percy Gardner (1846–1937), promoter of studies in art and mythology as related to ancient coins, published *Types of Greek Coins*, a valuable work for the student. Other representative British collectors and scholars of the century were Edward H. Bunbury, Arthur J. Evans, Hyman Montagu (author of an interesting study on more recent coins of England: *The Copper, Tin, and Bronze Coinage and Patterns for Coins of England*, 1893), and especially Rogers Ruding, noted for his earlier publication of documentary material from various archives entitled *Annals of the Coinage of Great Britain* (2nd ed., 1819).

In Denmark the leading name was Ludvig Müller (1809–1891),[118] in charge of ancient coins in the Royal Coin Cabinet and author of basic studies on the coinages of Philip II of Macedon, of Alexander the Great (*Numismatique d'Alexander le Grand*, 1855) of Lysimachus, King of Thrace (*Die Münzen des thrakischen Königs Lysimachus*, 1858), and on the numismatics of Carthage and North Africa (*Numismatique de l'ancienne Afrique*, 1860–1874).

In Germany, worth noting among many famous names, are Julius Friedlaender (1813–1884), director of the steadily growing coin cabinet in Berlin, Karl Ludwig Grotefend, Alfred von Sallet, Heinrich Dressel,[119] Hermann Grote, Emil and Max von Bahrfeldt,[120] and Johannes Brandis, noteworthy for his metrological studies. *Das Münz-, Mass- und Gewichtswesen in Vorderasien bis auf Alexander den Grossen* (1866) which opened the way for the later treatise of Friederich Hultsch (see p. 45).

In Italy there were: Count Bartolomeo Borghesi (1781–1860), epigrapher and numismatist, whose complete works—of which his *Oeuvres numismatiques* (1862–1864) was a part—were published in France under the auspices of Napoleon III; Abbot Celestino Cavedoni, with many publications on ancient numismatics and especially on the coinages of the Roman Republic; Giuseppe Fiorelli, with the still very useful catalog of the Naples collections; Antonino Salinas, with *Le monete delle antiche città di Sicilia* (1867); and Luigi Sambon, with his still valuable works on southern Italian issues, *Recherches sur les anciennes monnaies de l'Italie méridionale* (1863) and *Recherches sur les monnaies de la presqu'île italique* (1870).

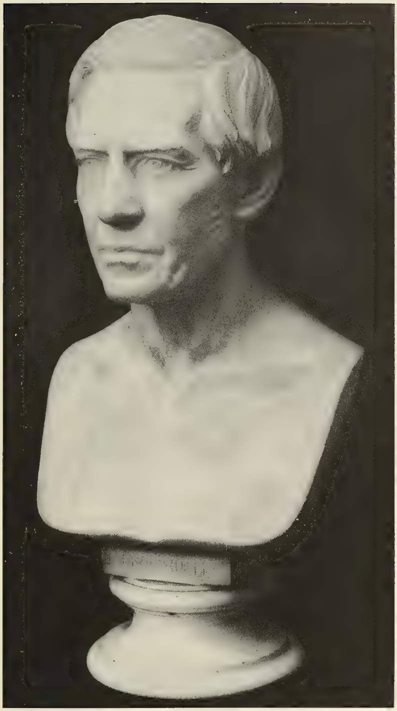

Fig. 33.—Ludvig Müller (1809–1891), Danish numismatist (photo courtesy Kongelige Møntog Medaillesamling, Copenhagen).

In Spain an outstanding name—in addition to the noted A. Campaner y Fuertes and A. Delgado—is Aloïs Heiss (1820–1893), author of such standard works on ancient and modern Spanish numismatics

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[117] See also *Fitzwilliam Museum: Leake and General Collections* (1940–1951).

[118] For his biography, see Jörgensen (1891); Pick (1891).

[119] For his biography, see Franke (1959).

[120] For Grote, see Berghaus (1952); for Emil and Max Bahrfeldt, see Jesse (1953).

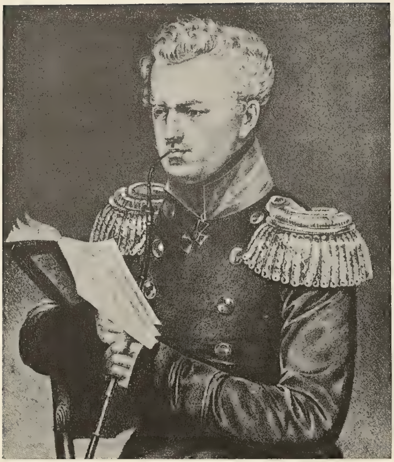

Fig. 34.—Feodor Fedorovich Schubert (1789–1865), noted Russian collector and author (photo courtesy the Hermitage, Leningrad).

as *Descriptión general de las monedas hispano-cristianas* (1865–1869) and *Description générale des monnaies antiques de l'Espagne* (1870). A still useful reference book which should be mentioned is the huge *Catálogo de la colección de monedas y medallas* (1892), representing the important cabinet of Manuel Vidal Quadras y Ramon.

Most of the basic reference books on Russian numismatics were written during the later part of the 19th century. Fedor Fedorovich Schubert (1789–1865) issued a detailed catalog of his collection in 1857 and republished it later in two separate works: *Monnayes russes des dernières trois siècles* (1857), and *Monnaies et médailles russes* (1858). A few decades later, another outstanding collector, Count Ivan Tolstoi, covered the early periods of the Russian principalities in such works as *Drevneishie russkie monety velikogo kniaszhestva Kievskogo* (1882) and *Monety Pskovskie* (1886). The great specialist in ancient and medieval numismatics, Aleksei V. Oreshnikov, produced in *Russkie monety do 1547 goda* (1896) the classic work on early Russian coinages. Chaudoir's *Aperçu sur les monnaies russes* and Schubert's works (mentioned earlier), published in French, are, even to the present day, the most popular reference books outside of Russia on general Russian numismatics. Because of the language barrier, Christian Giel's compact list *Tablitsy russkikh monet dvukh poslednikh stoletii* (1898) and Ilyin and Tolstoi's publication on Russian coins struck from 1725 to 1801, *Russkie monety chekanennye s 1725 po 1801 g.* (1910), are referred to only occasionally. The monumental publication of Grand Duke Georgii Mikhailovitch, cousin of Tsar Nicholas II, represents Russia's outstanding contribution to modern numismatics: *Monety tsarstvovanii* (1888–1914) describes in 12 documented volumes his extensive collection of Russian coins, which cover the period from the reign of Peter the Great to 1890.

Fig. 35.—Aleksei Vasilievitch Oreshnikov (1855–1933), famous Russian historian and numismatist (photo courtesy the Hermitage, Leningrad).

Among the prominent numismatists in Poland should be mentioned the great medievalist Joachim Lelewel (1786–1861),[121] who left his homeland after the 1831 Revolution and chose first France and then Belgium as places of asylum. Most significant of his works is *Numismatique du moyen-âge* (1835). His contemporary Edward H. Raczynski (1787–1845), with a publication on Polish historical medals, *Le médailler de Pologne* (1838), as it appeared under its French title, and later Count Emeric Hutten-Czapski (1829–1896), with his large *Catalogue de la collection des médailles et monnaies polonaises* (1871–1916), helped to establish Poland's prestige in numismatics.

MODERN TRENDS AND ACCOMPLISHMENTS

Since numismatics from the beginning of the 19th century presents such a complex picture, it has seemed more advantageous to view the science in three distinct and consecutive periods: the *early eighteen-hundreds* (pp. 34–37), a relatively dormant span, still strongly tied to its preceding century, but with a slow, steady awakening; the *midcentury* (pp. 37–41), characterized by a conscious drive toward higher standards, a preparatory interval for subsequent accomplishments; and finally, the *modern era*, which has seen the most advanced work in the history of numismatics. In this last period, the science has followed an unbroken line of evolution, extending from the final quarter of the 19th century to the present day.

While an approach along geographical lines within each historical period has been useful until now in the present study—permitting a clearer picture of numismatic evolution within each country—the complexity of modern research makes it necessary, from this point on, to proceed on the basis of specialized fields in the science. Increased international contacts, facilitated through modern ways of life—which later on, in the 20th century, developed into genuine international cooperation through congresses, meetings, and exhibitions—opened a new era in numismatics. Although national barriers have never impeded collectors from exchanging specimens heretofore, scholars still were tied strongly to local or national traditions. This pattern changed toward the end of the 19th century, and very often new trends or methods which had been developed in one country found immediate response in related circles abroad.

Simultaneously, the attitude of scholars toward numismatics took a drastic turn. The time of the "Münzbelustigungen," a leisurely game with old and puzzling objects, was gone. Gone also was the spirit of Humbold, the universal genius who approached all fields for the enjoyment of a continuous accumulation of knowledge. Numismatics had reached the point wherein the bulk of collected data, spotty as it may have been, needed to be utilized for wider constructive scholarship. The deeply penetrating mind of the specialist who is thoroughly familiar with aspects of specific historical periods and who can comprehend the function of coins within a multiplicity of phenomena had to replace the well-versed but often superficial amateur. "To be a great general numismatist is beyond the powers of one man," was stated as early as 1885 by Stanley Lane-Poole;[122] yet this British scholar believed that his generation had produced numismatists who could dignify the "science as being no longer servile but masterly." Numismatics—no longer a mere auxiliary to archeology and history—was a science in its own right and, as such, had to be defined as to scope and method.

Another characteristic of numismatic research, which has emerged in the last 30 years, is the increasing number of special subjects that are being embraced by the constantly expanding range of numismatics. New approaches—such as the study of technical and esthetic aspects of coins, the laboratory methods of metallurgical research applied to coins, the study of falsifications, the increasing emphasis on photography as a major instrument in numismatic studies and as an educational factor in popularizing coins, the reinforcement of more traditional subjects like metrology and epigraphy—are finding wider and deeper application. The related studies of primitive media of exchange and especially the theory of the origin of money, a pet subject with German economists and numismatists during the past century, are producing new and original interpretations. Paper currencies and various other documents of value have entered the focus of modern research.

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[121] Haisig, "J. Lelewel's Importance in European Numismatics" (1961).

[122] *Coins and Medals*, p. 2.

The role of revolutionizing the course of ancient numismatics—opening new ways and pointing out new perspectives in its research—fell to two men, Friedrich Imhoof-Blumer in the Greek field and Theodor Mommsen in the Roman.

GREEK NUMISMATICS

Imhoof-Blumer's name trails like a comet across the field of Greek numismatics. Born at Winterthur, Switzerland, in 1838 into a family of wealthy industrialists, he decided in his midthirties to devote his life to Greek numismatics.[123] Seldom, if ever, has an "amateur"—if this word could ever apply to Imhoof-Blumer—attained such a level of perfection in his research; seldom has a numismatist brought about such significant innovations. The study of Greek numismatics has always exerted a strong attraction on collectors because of the highly esthetic quality of Greek coins and because of the intriguing fact that these coins seldom bear more than the name of a city or a ruler—thereby posing challenging problems of identification. Imhoof-Blumer started as a collector of Greek coins, but very soon he began to publish his own observations as he discovered many entirely unknown or erroneously attributed coins. A long series of articles and publications was the result, of which *Monnaies grecques* (1883), *Griechische Münzen* (1890), and *Kleinasiatische Münzen* (1901–1902) are major works. No problem seemed too difficult for him to solve. His inquisitive spirit and his critical approach in using documentary and material evidence make most of his publications models of research. Sir George Macdonald rightly has called him *il maestro di color che sanno.*

Impressed by certain die similarities of some staters in the Greek province of Acarnania—coins which previously had been attributed to various cities on the basis of the obverse monograms—Imhoof-Blumer decided to assign them all to the same mint.[124] This recognition of the existence of identical dies—arising from a comparative study of coins—and the resultant identification of die-link sequences was a master stroke which opened new perspectives for the entire field of numismatics. This approach became a basic method for establishing the relative chronology of undated series such as Greek coinages. Since Winckelmann's time [125] stylistic considerations had been a major clue in delineating the time factor, but, as noted by Sir George Macdonald, "classification by style can hardly take us beyond a grouping into periods, whereas die-study may carry us a stage further and enable us to determine sequences within the periods with certainty and precision." [126]

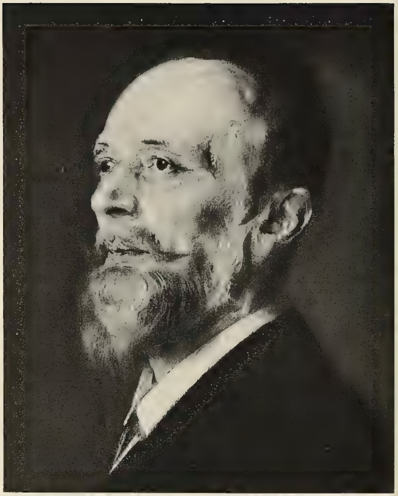

Fig. 36.—Friedrich Imhoof-Blumer (1838-1920), great Swiss collector and author in a portrait by Wilhelm v. Kaulbach (photo courtesy Mrs. L. Sulzer-Weber, Winterthur, Switzerland).

Imhoof-Blumer's principles, employed by the Germans—as in Kurt Regling's monograph on the coins of *Terina* (1906)—and by British scholars, found the most brilliant application, however, across the ocean in America, where Edward T. Newell, in 1912, revolutionized the chronology and attributions of certain coinages of Alexander the Great. It is interesting to note that, as early as the 1870s, an American numismatist, Sylvester S. Crosby—certainly unaware of Imhoof-Blumer's new methods—had tried, in his work *The Early Coins of America* (1875), to establish a chronological arrangement in early American coins by studying their die combinations. At the present time, die-studies are the common procedure in Greek numismatics and attempts have been made recently to apply it to Roman as well as modern coinages.

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[123] For additional biographical and bibliographical data, see his obituary in *Revue suisse de numismatique* (1920); also Engeli, *Friedrich Imhoof-Blumer* (1924).

[124] *Die Münzen Akarnaniens* (1878).

[125] See Cahn, "Analyse et interprétation du style" (1953); and especially the basic work of Regling, *Die antike Münze als Kunstwerk* (1924).

[126] "Fifty Years of Greek Numismatics," p. 14.

Inspired by Theodor Mommsen's idea of creating an extensive work on Greek coins as a companion to the "Corpus of Latin Inscriptions," the Prussian Academy of Sciences in Berlin assigned to Imhoof-Blumer the direction of *Die Antiken Münzen Nord-Griechenlands*. Such a corpus was intended to supersede all publications on the subject by describing every known coin type of each city or province within a chronological sequence, with full attention given to all available source material. This dream of a corpus of all ancient Greek coins seems to have haunted numismatists since the early 16th century, when Wolfgang Lazius first proposed such a work. But it proved too ambitious even for the late 1800s, and despite competent scholars, this gigantic German work progressed very slowly until it finally came to a halt in the late 1930s.[127]

In 1939 new plans were made to proceed on a basis of international cooperation. Under the direction of Prof. Gerhard Rodenwaldt, scholars such as Paul M. Strack, Achim Hundt, Theodor Gerassimoff, and Vladimir Clain-Stefanelli were assigned to continue the work, but the enterprise died out during World War II.

At the turn of the century France began producing noteworthy numismatic works. Almost single-handedly, Ernest Babelon (1854–1924),[128] director of the Cabinet des Médailles in Paris and author of many authoritative works on Greek numismatics, undertook the task of publishing comprehensive works on the coinages of the eastern Greeks with such titles as *Les rois de Syrie* (1890) and *Les Perses Achéménides* (1893). But his greatest work, *Traité des monnaies grecques et romaines* (in five volumes, published between the years 1901 and 1932), in which he tried to challenge the largest publications, unfortunately remained only a torso.

Fig. 37.—Ernest Babelon (1854–1924), director of the Cabinet des Médailles and author of many outstanding works in numismatics (photo courtesy American Numismatic Society).

At the British Museum a group of first-rate numismatists established what was to become a venerable tradition in the field of ancient numismatics: Reginald Stuart Poole (1832–1894), keeper of the coin cabinet; Percy Gardner (1846–1937); George F. Hill (1867–1948), who published a series of excellent works, *Handbook of Greek and Roman Coins* (1899), *Historical Greek Coins* (1906), *Historical Roman Coins* (1909); and especially Barclay V. Head (1844–1914), Poole's successor at the Museum.[129] With his *Historia nummorum* (1887), Head produced, in compact but excellently documented form, an indispensable guide book on Greek coinages. He described his purpose: "One of the distinctive features of the present work

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[127] For complete, individual titles, see literature cited. See also Imhoof-Blumer, "Bericht über das Griechische Münzwerk der Preussischen Akademie" (1910).

[128] Dieudonné, *L'oeuvre numismatique d'Ernest Babelon* (1924).

[129] For additional information, see Head's obituary in *Zeitschrift für Numismatik* (1915).

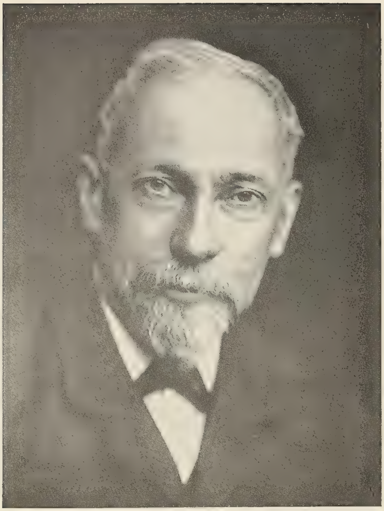

Fig. 38.—Barclay V. Head (1844–1914) of the British Museum coin cabinet and author of *Historia nummorum* (photo from *Corolla Numismatica*).

is . . . to build up in outline the history of the ancient world as it existed from the seventh century before our era down to the closing years of the third century A.D., a space of nearly a thousand years."[130] This task Head accomplished masterfully within his 964 pages.

At Reginald Poole's instigation, the British Museum in 1873 began the publication, in catalog form, of its collection of Greek coins. During a span of over fifty years a work of impressive quality has been achieved; by 1927 twenty-nine volumes had been issued. Maintaining Eckhel's geographical sequence, the titles include the ancient Greek coinages of Italy, Greece, the Islands, Asia Minor, Egypt, and Cyrenaica; still to be covered are Gaul, Spain, and Mauritania. While the first volumes, on which Poole and Gardner collaborated, adhered strictly to the form of a catalog, the later volumes, written by B. V. Head, G. F. Hill, and more recently E. S. G. Robinson—with extensive introductory studies on the monetary history of each geographical entity—come closer in their concept to a genuine corpus. Today this fine tradition is being continued by Kenneth G. Jenkins, Keeper of Greek coins in the Museum.

In addition to the catalogs, the British Museum in 1932 published a selection of the most outstanding Greek coins in the museum. *A Guide to the Principal Coins of the Greeks* (reprinted in 1959 in its 4th edition) was compiled by G. F. Hill on the basis of B. V. Head's earlier *Coins of the Ancients* (1880).

Contrary to the opinion of some who consider a catalog a waste of effort, unworthy of any scholar, such publications are invaluable. No corpus or monograph could be completed without the aid of accurate descriptions of countless specimens. Consequently, an increasing number of collections, public and private, are made accessible to research through such catalog publications. Largest and most impressive is *Sylloge nummorum Graecorum*, the title of an international series of publications: British, Danish, German, and, more recently, American catalogs published separately in those countries. This multi-volume work, which tries to apply to numismatics the principles of the *Corpus Vasorum*, stresses especially the importance of excellent photographic reproductions of every specimen. Begun in 1931, it is still being published.

Another outstanding work which contains numerous photographs of coins is the catalog of the *McClean Collection of Greek Coins* (1923–1929), compiled by S. W. Grose for the Fitzwilliam Museum of Cambridge University and used often as a reference book. In the United States, the Museum of Fine Arts in Boston, which possesses some of the finest examples of Greek coins (most of which came from the E. P. Warren Collection and were published earlier by Kurt Regling in *Die griechischen Münzen der Sammlung Warren*, 1936), published in 1955 their own *Catalogue of Greek Coins*, compiled by Agnes Baldwin Brett. Also, the J. Ward Collection, housed in the Metropolitan Museum, was published by Sir George F. Hill in 1901.

One of the most interesting phenomena in classical numismatic research is the transformation through which the idea of a corpus has gone. Initially conceived in the 16th century as a publication which would encompass the entire classical world, it has been confined in modern times, by the Prussian Academy of Sciences, to ancient Greek coinages, but even this was never completed. Instead, monographs of single Greek cities or provinces—in other words, subjects of more restricted scope—were given preference, and within the last few decades a considerable number of first-rate publications of this sort have appeared. They present the numismatic material in a well-rounded historical picture, scrutinized and analyzed from a variety of viewpoints. Metrological as well as art elements are given maximum consideration, and the coins are viewed in the context of economic trends and art products of each period.

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[130] Preface to the first edition, p. xvii.

Some outstanding monographs are: in Germany, Willy Schwabacher, "Die Tetradrachmenprägung von Selinunt" (1925), Erich Boehringer, *Die Münzen von Syrakus* (1929); in Switzerland, Herbert Cahn, *Die Münzen der sizilischen Stadt Naxos* (1944); in France, Oscar Ravel, *Les "Poulains" de Corinth* (1936–1948); in Belgium, Jules Desneux, *Les tétradrachmes d'Akanthos* (1949); in England, Charles T. Seltman, *Athens, Its History and Coinage* (1924); in the United States, Sydney P. Noe, *The Coinage of Metapontum* (1927–1931) and *The Thurium Di-staters* (1935).

Works of signal importance in ancient Greek numismatics, introducing new viewpoints in the problem of dating the earliest Greek coinages, have been published in the last decade. W. L. Brown's article "Pheidon's Alleged Aeginetan Coinage" (1950), in which he attempted to establish the date of the earliest coinage in continental Greece, was followed shortly after by E. G. Robinson's basic discussion on the date of the first Greek coinage in Asia Minor, "The Coins from the Ephesian Artemision Reconsidered" (1951), and continued in 1956 under the title "The Date of the Earliest Coins." In addition, important changes in the dating of coinages of the Persian kings have been brought about almost simultaneously by two publications, Sydney P. Noe's *Two Hoards of Persian Sigloi* (1956) and E. G. Robinson's "The Beginnings of Achaemenid Coinage" (1958).

A further development in the field of classical numismatics is that publications which give full consideration to special problems are becoming increasingly popular. Metrology, the science of weights and measures and a favorite subject since the early 15th century, has received excellent treatment in the studies of Friedrich Hultsch (*Griechische und römische Metrologie*, 1882), Johannes Brandis, Erich Pernice, Prince Michel C. Soutzo (*Systèmes monétaires primitifs*, 1884), Walther Giesecke (*Antikes Geldwesen*, 1938; *Sicilia numismatica*, 1923; *Italia numismatica*, 1928), and Oskar Viedebantt (*Antike Gewichtsnormen und Münzfüsse*, 1923).

"Epigraphical Notes on Greek Coins" (1945–1960) by Marcus Tod, *Bibliography of Greek Coin Hoards* (1925 and 1937) by Sydney P. Noe, the studies on falsifications by Hugo Gaebler (*Fälschungen makedonischer Münzen*, 1931–1942) and Oscal Ravel ("Notes techniques pour reconnaître les monnaies grecques fausses," 1933)—continuing the classic works of Joannes Svoronos and Sir George Hill [131] on the famous counterfeiters Constantine Christodoulos and Carl Wilhelm Becker—cast new light onto other areas. Problems connected with the minting process were the subject of studies by Sir George Macdonald ("Loose and Fixed Dies," 1906), Charles T. Seltman, Carol H. V. Sutherland, Oscar E. Ravel, Willy Schwabacher, Ettore Gabrici (with his controversial *Tecnica e cronologia delle monete greche dal VII al V secolo a.C.*, 1951), and, more recently, C. Kraay.

New and challenging possibilities emerge from laboratory tests: michrochemical analyses, specific gravity tests, spectrographic analyses, and the application of x-rays and gamma rays to the study of coins. In Belgium Paul Naster, in the United States Earle R. Caley (*Chemical Composition of Parthian Coins*, 1955), and in Canada Prof. William P. Wallace ("Impurities in Euboean Monetary Silver," 1954) are the names of only a few scholars who have been instrumental in broadening the way for a more exact knowledge of the metallic composition of ancient coins—a field of research opened up by the work of B. V. Head, J. Hammer, and K. B. Hofmann before the turn of the century. Fresh viewpoints on the metallic supply of the mints, on economic phenomena such as the debasement of currencies, and on new and positive methods in the detection of authentic, false, or altered specimens, are the perspectives revealed by these methods.[132]

The esthetic perfection of Greek coins has always appealed to collectors and scholars. Percy Gardner, Reginald Poole ("On Greek Coins as Illustrating Greek Art," 1864), George F. Hill (*Select Greek Coins*, 1927), and Sir Arthur Evans have suggested the relation between the history of art and classical numismatics, but it is due to Kurt Regling that the Greek coin has come to be generally accepted as a

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[131] Svoronos, *Synopsis des mille coins faux du faussaire C. Christodoulos* (1922); Hill, *Becker the Counterfeiter* (1924).

[132] An excellent bibliography on the subject is in Naster, "*Numismatique et méthodes de laboratoire*" (1953); see also the journal *Archaeometry*.

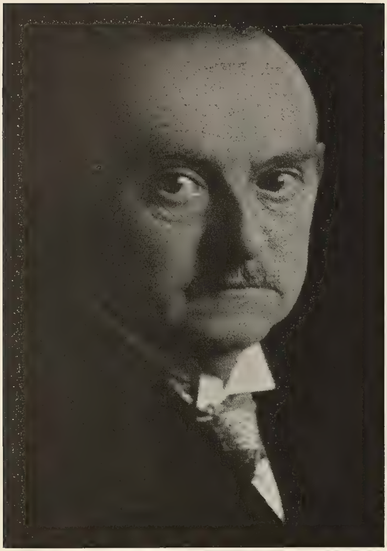

Fig. 39.—Kurt Regling (1876–1935), director of the Münzkabinett in Berlin (photo courtesy Staatliche Museen, Berlin).

work of art, a manifestation of the highly esthetic mind of the ancients and an equal to major works of art. His book *Die antike Münze als Kunstwerk* (1924) has found many enthusiasts, with the result that it has become a tradition among wider circles of collectors and art students to consider Greek coins almost exclusively from the esthetic point of view. Giulio E. Rizzo's monumental publication on the Greek coinage of Sicily, *Monete greche della Sicilia* (1946), and especially Charles T. Seltman's work, *Masterpieces of Greek Coinage* (1949), with its excellent photographic enlargements taken from outstanding specimens and accompanied by explanatory text, have contributed greatly to the diffusion of this attitude. Recently, Prof. W. Schwabacher has published an excellently written monograph devoted to one of the great masterworks in ancient Greek numismatics, the demareteion of Syracuse. *Das Demareteion* (1958) has found wide appeal with nonspecialists as well as scholars.

In the late thirties, the Germans Max Hirmer and Kurt Lange initiated, almost simultaneously, a new kind of publication with Hirmer's *Die schönsten Griechenmünzen Siziliens* (1940) and Lange's *Götter Griechenlands* (1940), *Herrscherköpfe des Altertums* (1938), *Antike Münzen* (1947), and *Charakterköpfe der Weltgeschichte* (1949). Intended for wider circles of amateurs and the public in general, these books accentuated the esthetic aspect of coins by reproducing enlarged and artistically executed photographs of beautiful specimens. Many of the volumes carry very little text. A few notes or a brief introductory study gives the reader necessary information and entrusts to pictures the function of telling the story. These very attractive publications, which usually do not limit themselves to the Greek period but freely roam the entire span of history, have had a highly educative result and certainly contribute more than any other kind of publication to the familiarization of the uninitiated with the world of numismatics.

Outstanding publications of this kind are: Herbert Cahn's *Monnaies grecques archaïques* (1947), *Frühhellenistische Münzkunst* (1945); Leo and Maria Lanckoronski's *Das römische Bildnis in Meisterwerken der Münzkunst* (1944), *Mythen und Münzen* (1958); Leopold Zahn's *Schönes Geld aus zwei Jahrtausenden* (1958); and Jean Babelon's *Dauernder als Erz, das Menschenbild auf Münzen und Medaillen* (1958)—also in English as *Great Coins and Medals* (1959)—with excellent photographs by Jean Roubier.

ROMAN NUMISMATICS

Based on the preliminary works of Count Bartolomeo Borghesi and Celestino Cavedoni, Theodor C. Mommsen (1817–1903),[133] the famous historian of ancient Rome, issued in 1860 in Berlin his master work *Die Geschichte des römischen Münzwesens.* Isolated historical phenomena and loose chronological elements which had puzzled many of his predecessors were solved by Mommsen and built into a single logical structure which attempted to define the evolution of a highly organized institution, the Roman

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[133] For additional biographical and bibliographical information, see Mommsen's obituaries: Dressel in *Zeitschrift für Numismatik* (1904); Gabrici in *Revista italiana di numismatica* (1903).

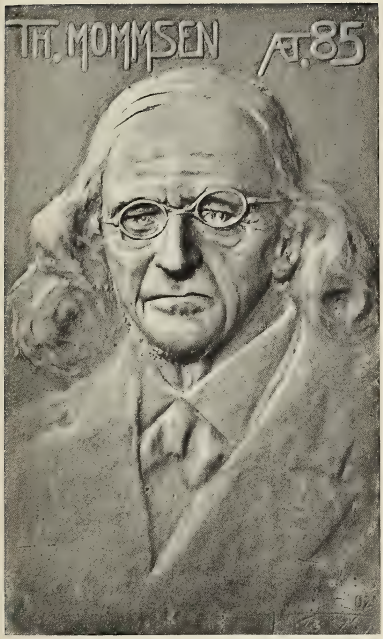

Fig. 40.—THEODOR C. MOMMSEN (1817–1903), noted German historian (Div. of Numismatics photo).

mint. Seeking the basic principles which governed the mint and at the same time considering the progressive development in the organization of previous Asiatic and Greek mint systems, Mommsen tried to explain the legal aspects of Roman coinage as part of the fundamental state laws and to solve the difficult problem of chronology within the Republican coinage.

After Joseph Eckhel's earlier enlightening work, Mommsen's approach seemed to be the logical direction of development for Roman numismatics. Nevertheless, for decades to come, the erudition of both men had to yield in popularity to Henri Cohen's unscholarly but extremely practical manuals on Roman coins. The latter's methods in his *Description générale des monnaies de la république romaine* (1857) stood for almost three decades until they were revised partly by Ernest Babelon, who tried to use Mommsen's chronological system but ended up maintaining Cohen's unscientific alphabetical arrangement of the so-called "family coins." Babelon's *Description historique et chronologique des monnaies de la république romaine* (1885–1886) was challenged later by Herbert Grueber's chronological arrangement—based on Count de Salis' work—which Grueber followed in his excellent catalog and study *Coins of the Roman Republic in the British Museum* (1910). Also indispensable were Max von Bahrfeldt's corrections and additions to these listings, published over a period of twenty-two years in his three-volume *Nachträge und Berichtigungen* (1897–1919).

During the first three decades of the present century, interest in Roman numismatics has centered mainly around the imperial coinage.[134] Special attention must be given in Italy to Francesco Gnecchi with his excellent publications of Roman medallions and coins, *I medaglioni romani* (1912) as well as *Monete romane* (1896), and Lodovico Laffranchi, who, in a great number of studies, covered many historical aspects of the Roman Empire. Remarkable are his monographs on the organization of the Roman mint and on the coinages of Augustus and Magnentius.[135]

Representative of German research in the same field are Max Bernhart and Paul Strack. The former produced a very systematic and useful handbook on the imperial coinage, *Handbuch zur Münzkunde der römischen Kaiserzeit* (1926), while the latter attempted to apply the corpus idea to the coinages of the second century A.D., with strong emphasis on the historical interpretation of numismatic material, in his *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts* (1931–1937).

The dean of Roman numismatics, however, is Harold B. Mattingly (1884–1964), who has been associated for many years with the British Museum. A score of important publications scattered over a period of fifty years suggest his extensive knowledge, his deep understanding of a civilization long past, and his ability to bring that era to vivid life for the reader.

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[134] For bibliographies of this period, see BERNHART, *Bibliographischer Wegweiser* (1922); CARSON, "A Report on Research in Roman Numismatics" (1953). For the latest developments, see HAROLD and HAROLD B. MATTINGLY, "The Republic and the Early Empire" (1961); KENT, "The Late Roman Empire" (1961).

[135] For a list of his works, see PAGANI in *Rivista italiana di numismatica* (1955).

"The life of the Empire," writes Mattingly, "is, in many ways, so like our own that we can read of it without often feeling shock or surprise." [136] *The Coins of the Roman Empire in the British Museum*, a large publication of which six volumes have been issued since 1923, and *The Roman Imperial Coinage*, a comprehensive work still in process of publication, which Mattingly, in collaboration with Sydenham, began to publish in the same year, constitute basic references for the imperial series. Not to be overlooked also are Mattingly's comprehensive studies, his earlier *Roman Coins from the Earliest Times to the Fall of the Western Empire* (1928) and his more recent work *Roman Imperial Civilization* (1957).

HAROLD MATTINGLY ON HIS RETIREMENT FROM THE BRITISH MUSEUM 1910–1947

Fig. 41.—Harold Mattingly (b. 1884), famous British scholar (photo from *Essays in Roman Coinage*).

The two catalogs with their high scholarly standards—reflected in the chronological arrangement of the coin material, in detailed descriptions, in profuse historical notes, and especially in elaborate studies of the respective coinages which precede every volume—should have supplanted Cohen's handbook on imperial coins with the general public, as it has with scholars, but this has not been the case.

An article entitled "The Date of the Roman Denarius and Other Landmarks in Early Roman Coinage," which Mattingly and E. S. G. Robinson published in 1933 in the *Proceedings of the British Academy*, brought on one of the liveliest disputes in numismatics. The British scholars, using considerable material evidence, proposed to move the date of the beginning of the Roman Republican denarius from 269 B.C. to 187 B.C. This thesis, or as Rudi Thomsen called it, "the Mattingly revolution," found ready support in England, France, and Germany. The Rev. E. A. Sydenham, applying these premises, wrote a handbook, *The Coinage of the Roman Republic* (1952), the first of its kind in the twentieth century and a book which should replace Ernest Babelon's obsolete *Monnaies consulaires*. In Germany Walther Giesecke, the best modern specialist in ancient metrology, discussed the problem on a corresponding basis in his book *Antikes Geldwesen* (1938) and arrived at similar conclusions which invalidated the old, traditional date.

In direct opposition to this stand, there arose an Italian school under Ettore Gabrici, Lorenzina Cesano, Laura Breglia, and Attilio Stazio.[137] Such a dispute could hardly fail to bring numismatics of the Roman Republic to the center of scholarly attention, and a considerable number of more or less authoritative handbooks and articles have appeared in recent years, taking various strong positions in the controversy.

In 1952 the Austrian numismatist Karl Pink stepped into the debate with his publication *Triumviri Monetales and the Structure of the Coinage of the Roman Republic*. Pink is renowned as the representative of the Viennese school of research, which attempts to establish, on the basis of data yielded by the coins, the fundamental system of the organization of the Roman mint. On this premise, he outlined the structure of the coinage, explaining its chronological sequence as well as its evolution. This "Aufbau," as it is called, was used by Pink in his study "Der Aufbau der römischen Münzprägung in der Kaiserzeit" (1933+) and by other Viennese numismatists, such as Robert Göbl and Georg Elmer, to determine the organization of the mint in the late 3rd and 4th centuries A.D.

The emphasis placed by Prof. Pink on a closer study of the legal aspects of coinage as an expression of the Roman state finds a counterpart in Prof. Andreas Alföldi's proposal to give more consideration to stylistic elements as a clue in establishing related series. The latter's views can be seen in his article "Studien zur Zeitfolge der Münzprägung der römischen Republik" (1954).[138] In addition to stylistic considerations, Alföldi also proposed the comparative study of dies as a possible key to solving problems of relative chronology in certain coinages. He attempted to apply this in his article "The Portrait of Caesar on the Denarii of 44 B.C. and the Sequence of the Issues" (1958). Similar methods were used by the British scholar Colin M. Kraay in his studies of the Roman imperial series. Mr. Kraay was able to cast new light on the operation of the Roman mint by virtue of his research on the copper coinage of Emperor Galba in the book *The Aes Coinage of Galba* (1956).

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[136] *Roman Imperial Civilization*, pp. 2–3. For Mattingly's publications, see Copinger, *Bibliography* (1956).

[137] See the excellent outline in Thomsen, *Early Roman Coins* (1957); also Stazio, "Progressismo e conservatorismo negli studi sulla più antica monetazione romana" (1955).

It is obvious that the numismatic history of the first Roman emperors is especially popular with British scholars. In order to complete our survey of Roman numismatics we should not fail to mention Robert A. G. Carson, in charge of Roman coins at the British Museum, who has made many contributions to the history of Roman coinage in general and of Roman Britain in particular. Michael Grant is the author of a recent handbook, *Roman Imperial Money* (1954), as well as studies on the coinages of Augustus and Tiberius, such as *From Imperium to Auctoritas* (1946) and *Aspects of the Principate of Tiberius* (1950). The great specialist in the history of Roman Britain is Carol H. V. Sutherland, who has produced, in addition to many studies on Roman numismatics, a history on *Coinage and Currency in Roman Britain* (1937).[139]

The history of the coinage of the late Roman Empire has proven to be a very attractive field of research for scholars in many countries. In surveying the past few decades we should mention, in addition to the work of the above-noted Austrians Karl Pink, Robert Göbl, and Georg Elmer, many additional studies coming from other countries. To the monumental but partly obsolete work of Jules Maurice, *Numismatique constantinienne* (published in 3 volumes between 1908 and 1912), have been added recently a series of signal contributions to the study of the coinage of Constantine the Great, by Patrick Bruun, Andreas Alföldi, and Maria Alföldi. Other periods of Roman history have been investigated in numerous studies which range from coin hoards, through the history of the late Roman mints, to such diversified themes as the metrology and technique of late Roman coins. The British scholars Robert A. G. Carson, Carol H. V. Sutherland, J. P. C. Kent, Philip Hill, the Germans Konrad Kraft, Maria R. Alföldi, and the Austrian Guido Bruck, the French Pierre Bastien, and the Scandinavian Patrick Bruun are only a few of the outstanding scholars who have made substantial contributions in this field.

BYZANTINE AND NEAR EASTERN NUMISMATICS

In Byzantine numismatics recent scholarly attention has been concentrated chiefly on specialized subjects. Works on metrological problems, on the monetary policy and currency reforms of Byzantine emperors, as well as publications of hoard material can be recorded for the past few decades.[140]

In Israel the research of Adolf Reifenberg (1899–1953)[141] into his nation's old coinages (*Ancient Jewish Coins*, 1940) is being continued at present by many scholars at the Hebrew University in Jerusalem and at Kadman Numismatic Museum in Tel Aviv. Many important contributions are to be found in the publications of the Israel Numismatic Society and in Leo Kadman's monographs on ancient sites in the series "Corpus nummorum Palaestinensium."

The coinages of the Islamic world have been one of the favorite subjects for British scholars. To William Marsden's *Numismata orientalia illustrata* (1823–1825) and Oliver Codrington's *Manual of Musulman Numismatics* (1904) many useful references have been added during the closing years of the 19th and the beginning of the 20th centuries.[142] Stanley Lane-Poole's great work in 10 volumes, *Catalogue of Oriental Coins in the British Museum*, was issued between 1875 and 1890. Recently John Walker has published two volumes of the *Catalogue of Muhammadan Coins in the British Museum* (1941; 1956) which cover the Arab-Sassanian and the Arab Byzantine coinages. His works, as well as the studies of the American George C. Miles (*The Coinage of the Umayyades of Spain*, 1950, *Early Arabic Glass Weights and Stamps*, 1948, 1951) are real accomplishments in the field of Oriental numismatic research. Also noteworthy is Göbl's attempted "Aufbau" of the Sassanian coinage.

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[138] A list of his works is in Bögli, "Oeuvre littéraire d'André Alföldi" (1959–1960).

[139] For a bibliography of other works by Grant and Sutherland, see Carson, "A Report on Research in Roman Numismatics" (1953), and especially the recent report of Mattingly, "The Republic and the Early Empire" (1961).

[140] For more details on recent developments, see Carson, op. cit.; Kent, "The Late Roman Empire" (1961); Metcalf, "The Byzantine Empire" (1961).

[141] See Cassuto-Salzmann, "Bibliography of A. Reifenberg" (1954).

[142] For a survey, see Miles, "Islamic and Sasanian Numismatics" (1953) and "Islamic Numismatics" (1961). See also Mayer, *Bibliography of Moslem Numismatics* (1954).

Still useful as references are the old catalogs of major Islamic collections such as Carl J. Tornberg's *Numi cufici* (1846) for the Stockholm Royal Cabinet or Aleksei K. Markov's *Inventarnii katalog musulmanskikh monet* (1896) for the Hermitage collections. The catalog of the Berlin cabinet, *Katalog der orientalischen Münzen*, compiled by H. Nützel between 1898 and 1902, is of less permanent value.

The picture of modern Islamic research would be incomplete without mentioning the names of Paul Balog, author of many works on technical problems; Marcel Jungfleisch, specialist in metrological problems; Dominique Sourdel in France; Ulla S. Linder Welin in Sweden; A. Bykov and E. A. Davidovitch in Russia; or Felipe Mateu y Llopis in Spain, who has been publishing, among other specialized studies, a listing of Islamic coin hoards found in Spain.

MEDIEVAL NUMISMATICS

Whereas in ancient and, in particular, Greek numismatics the emphasis falls very often upon esthetics, in the medieval and modern periods historical and economic factors seem to prevail. Many complex problems connected with the turbulent events of the migrations and their ensuing periods—trade relations, trade routes, economic expansion, penetration of foreign ethnic elements, sovereign rights, and other questions—often find an unexpected answer in coin hoards. Thus, major attention is given to the exact historical attribution of coin finds and to a sound, comprehensive interpretation of hoard materials. German, French, Scandinavian, and British scholars lead in the field of interpreting medieval finds.

After the noted Austrian scholar Arnold Luschin von Ebengreuth,[143] the study of medieval numismatics was pursued by many German scholars such as Arthur Suhle, Wilhelm Jesse, and Walter Haevernick. Since 1947, Haevernick and a group of younger numismatists like Peter Berghaus and Gert Hatz, who have centered around the periodical *Hamburger Beiträge zur Numismatik*, have begun systematically to mine the enormous numismatic material of the German territories.[144] Recently Prof. Haevernick, in collaboration with Suhle and E. Mertens, attempted to collect the hoard material for Thuringia in *Die mittelalterlichen Münzfunde in Thüringen* (1955).

Stimulated by this intensive work on medieval finds, many scholars have produced first-rate studies such as monographs on single mints or entire regions as well as comprehensive works of a more general character. For example, Karl Kennepohl published the history of the coinage of Osnabrück, *Die Münzen von Osnabrück* (1938), and Friedrich Wielandt included in his *Badische Münz- und Geldgeschichte* (1955) the monetary history of Baden from the 14th century to modern times. The history of economics and especially the history of medieval trade centers have benefited greatly from such preliminary studies of hoards. As an illustration of the latter, Herbert Jankuhn's *Haithabu: Ein Handelsplatz der Wikingerzeit*, which went into its third edition in 1956, attempts to bring into focus the full picture of medieval trade in the Germanic north, while economic historian Emil Waschinski's main preoccupation is the history of prices and the buying power of money.[145] Other works of exceptional merit in Germany which draw strongly upon hoard material are Vera Jammer's study of the beginning of the coinage in Saxony (*Die Anfänge der Münzprägung im Herzogtum Sachsen*, 1952), Wilhelm Jesse's *Wendische Münzverein* (1928) and more recently his *Münz- und Geldgeschichte Niedersachsens* (1952). Jesse is also the author of an invaluable publication of source material on German numismatics: *Quellenbuch zur Münz- und Geldgeschichte des Mittelalters* (1924).

France has had a well-established tradition in this field since the past century, a tradition which has been kept alive through such authoritative studies as *Traité de numismatique du moyen âge* (1891–1905), by Arthur Engel and Raymond Serrure, and through such publications as those by Maurice Prou on the coinages of the Merovingians and the Carolingians (*Les monnaies merovingiennes*, 1892; *Les monnaies carolingiennes*, 1896), by Gustave L. Schlumberger on the period of the Crusades (*Numismatique de l'Orient Latin*, 1878–1882), and by Adrien Blanchet and Adolph Dieudonné, authors of a handbook on French coinages, *Manuel de numismatique française* published in 4 volumes between 1912 and 1936.[146] In recent times the late Pierre Le Gentilhomme (1910–1947), Jacques Yvon, and especially Jean Lafaurie are the leading names in numismatic research of the early and late Middle Ages in France. Although no major work on French feudal coinage has been issued within the past few decades, there have been many specialized studies on regional issues, on various coin types, or on coin finds and their importance. Quite often these studies are interspersed with interesting discussions on the monetary history of France.[147]

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[143] For his obituary, see LOEHR, "Das numismatische Lebenswerk Arnold von Luschins" (1933).

[144] Good bibliographical surveys on medieval numismatics are in BERGHAUS, "Die frühmittelalterliche Numismatik" (1961); HATZ, "Deutschland" (1961).

[145] *Währung, Preisentwicklung und Kaufkraft des Geldes in Schleswig-Holstein von 1266–1864* (1952) and *Die Münz- und Währungspolitik des Deutschen Ordens* (1952).

In Great Britain efforts have centered on a publication similar to the sylloge of Greek coins. The first two volumes of the *Sylloge of Coins of the British Isles—Ancient British and Anglo-Saxon Coins in the Fitzwilliam Museum* (1958) by Philip Grierson, and *Anglo-Saxon Coins in the Hunterian and the Coats Collections* (1961) by Anne Robertson—are a very promising beginning. Numerous other studies related to the coinages of the early kingdom are evidence of the excellent results being achieved in Great Britain by such scholars as Michael Dolley, Philip V. Hill, and Ian A. Stewart. As Grierson stated, "In the detailed study and analysis of privy marks . . . in the identification and even the reconstruction of the history of individual dies . . . English scholars have pushed their study to a higher point than has been attained elsewhere." [148]

A leading scholar of numismatic research on the Middle Ages is Philip Grierson from England. With a fine, synthesizing mind, possessing an impressive store of numismatic and historical data, he has covered in numerous studies almost the entire continent of Europe. Within the wide range of his research, which begins with the late Roman and Byzantine periods and comes up to the late Middle Ages, he encloses a multitude of geographical areas: Mediterranean, Central European, and Scandinavian countries, as well as the Arabic world. The monetary relations between East and West (especially the Byzantine Empire and the Arabs), the origin and evolution of certain coin denominations, the legal aspects of special monetary problems, the interpretation of coin hoards, the identification of counterfeits are only a few of the manifold subjects probed by Grierson.[149]

Also prominent in the field of medieval numismatics are the Scandinavian countries,[150] especially Sweden, with intensive research centered chiefly around finds of the migration period. Scholars such as Bengt Thordeman and Nils Ludvig Rasmusson in Sweden, Hans Holst in Norway, Georg Galster [151] in Denmark, and Helmer Salmo in Finland have contributed greatly to defining the role played by the Scandinavian region in the monetary evolution of Europe.

Currently, medieval numismatics also finds wide recognition beyond the Iron Curtain in eastern European countries. Recent reports, especially from Czechoslovakia, Poland, and Rumania, show that a very active effort is being directed toward excavations and toward classification of hoard material.[152] Some of the representative names include: Emanuela Nohejlová-Prátová in Czechoslovakia, author of an extensive publication on hoard material in Bohemia, Moravia, and Silesia from ancient times up to the 19th century, *Nálezy minci v Čechách, na Moravě a ve Slezsku* (1955–1958); Bucur Mitrea and Octav Floca in Rumania, with research on treasures found within the ancient Dacian territory; Stanislaw Suchodolski, Tadeusz Lewicki, and Ryszard Kiersnowski in Poland; V. L. Janin and J. V. Sokolova in Russia; Lajos Huszár in Hungary; and T. Gerassimou in Bulgaria.

Interest in the medieval period has been traditional in these eastern European countries. The publications of Marian Gumowski in Poland (*Podręcznik numizmatyki polskiej*, 1914, and *Corpus nummorum Poloniae*, 1939), of C. Moisil and O. Iliescu in Ru-

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[146] For further bibliographical information, see GRIERSON, *Select Bibliography*, pp. 36–40; BLANCHET and DIEUDONNÉ, *Manuel de numismatique française*, vol. 4, pp. 1–4.

[147] See YVON, "France, Italie et Orient Latin" (1961).

[148] Report on Medieval Numismatics," pp. 80–81.

[149] For some bibliographical information see GRIERSON, "Report" (1953); METCALF, "The Byzantine Empire" (1961); BERGHAUS, "Die frühmittelalterliche Numismatik" (1961).

[150] See RASMUSSON, "Scandinavian Medieval Numismatics" (1961).

[151] For a list of his publications, see GALSTER, *Coins and History*, pp. 7–13.

[152] For a bibliographical survey, see NOHEJLOVÁ-PRÁTOVÁ, "La numismatique en Tchéchoslovaquie depuis 1945" (1953). For reports on Polish numismatics, see LEWICKI, "Scientific Activity of the Numismatic Centre" (1961); SUCHODOLSKI, "Review of the Bibliography of Polish Numismatics, 1958–1960" (1961); KIERSNOWSKI, "La numismatique médiévale en Europe de l'Est" (1961). For Rumania, see MITREA, "Cincisprezece ani de activitate numismatică în Republica Populară Romînă: Bibliografie" (1960). For a general survey of Eastern Europe, see *Numismatische Literatur Osteuropas und des Balkans* (1959; 1963).

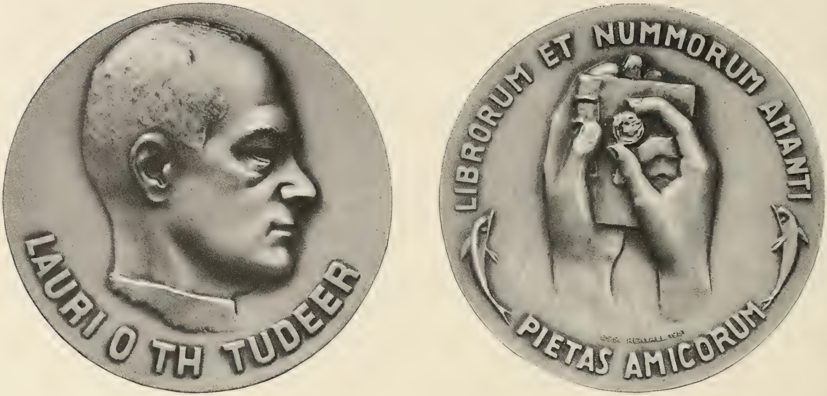

Fig. 42.—Lauri O. Tudeer (1884–1955), Finnish numismatist (photo courtesy Kongelige Mønt- og Medaillesamling, Copenhagen).

mania, of Nicolas A. Moushmov in Bulgaria, of Ivan Rengjeo,[153] Milan Rešetar, and R. Marič in Yugoslavia, although often difficult to use becuase of language barriers, are significant contributions to the general history of coinage.

MODERN NUMISMATICS

Moving into the field of modern numismatics, we would expect to find a strong trend toward the history of money. The emphasis placed upon coins within a framework of historical, economic, and legal functions in the growth of a nation should be the final stage of any specific study dealing with the evolution of a national coinage. Many of the modern publications, in fact, aim at these higher levels; however, many others still adhere to purely descriptive methods, almost entirely eliminating any historical interpretation.

The idea that, because modern coins are a part of our time, when documentary evidence is abundant, they do not need to be exploited as historical source material is chiefly responsible in contemporary numismatics for the scores of works which limit themselves to a listing of denominations, dates, and rulers. Also, since the publication of such works requires less effort and time, many catalogs of this kind have been published.

Good examples of situations demanding such treatment are found in Italy and Germany, two nations which possess extremely intricate monetary histories. King Victor Emmanuel III solved the problem of describing Italian coinages by publishing, between 1910 and 1940, a huge catalog in twenty volumes, the *Corpus nummorum Italicorum*. This work lists an impressive number of the coins struck by Italians or on Italian territories since the eighth century. A briefer work attempting to give a comprehensive history limited to modern Italian currencies was published in 1915 by Giovanni Carboneri: *Monete e biglietti in Italia dalla Rivoluzione francese ai nostri giorni.*

The Germans, who have numerous and excellent studies on various periods and local issues, cannot claim a single comprehensive work on their entire coinage. Mention should be made, however, of noteworthy publications in the form of a corpus which place numismatic material within a historical framework, like the studies of Alfred Noss on the coinages of Cologne, Treves, Jülich, and Berg, or of Friedrich von Schrötter on the coinages of Prussia.

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[153] *Corpus der mittelalterlichen Münzen von Kroatien, Slavonien Dalmatien und Bosnien* (1959).

Recent German publications, such as Friedrich Wielandt's *Badische Münz- und Geldgeschichte* (1958) or Peter Berghaus' *Münzgeschichte der Stadt Dortmund* (1958), have tried to depict the monetary history of single cities or principalities. Beyond these it would be difficult to enumerate the many authors of German monographs. The bibliographies provided in Gebhart's *Die deutschen Münzen des Mittelalters und der Neuzeit* (1929) and in Grierson's *Select Bibliography* cover the most important titles. A major German publication which should be mentioned, however, is the encyclopedia of numismatics, *Wörterbuch der Münzkunde* (1930). Edited by Friedrich von Schrötter, this book is the most complete work of its kind, providing authoritative information in every field of the science.

Although Schrötter's book is the most acclaimed, there are some other useful works of this kind. Albert R. Frey's *Dictionary of Numismatic Names* (1917) gives a less extensive coverage of numismatics in general. More recently, Humberto F. Burzio produced in his *Diccionario de la moneda hispano-americana* (1956–1958) an excellent reference book for Spanish-American coinages. Similar titles concerned mostly with national subjects are Edoardo Martinori's *La moneta* (1915) or Felipe Mateu y Llopis' *Glosario hispanico de numismática* (1946).

Neighboring Austria presents interesting features in the publications of the Viennese numismatists August von Loehr and Eduard Holzmair. Continuing the trend established by Viktor von Miller zu Aichholz (1845–1910), they can be classed among the most advanced representatives of the practically applied history of money. Miller zu Aichholz's compendious publication *Österreichische Münzprägungen* (1920)—revised in 1948 by Loehr and Holzmair—was one of the first national catalogs to include paper money and other documents of value. The same trend can be seen in Loehr's work on the history of money in Austria, *Österreichische Geldgeschichte* (1946), and in the coin exhibits of the Vienna cabinet prepared by Prof. Loehr and Dr. Holzmair. Along similar lines was the basic approach of the Swiss collector and numismatist Julius Meili, who included Brazilian paper money in his *Das Brasilianische Geldwesen* (1897–1905).

The concept of including paper currencies in the general study of numismatics is developing also in France, where R. Habrekorn and Jean Lafaurie, in the *Bulletin de la Société d'Étude pour l'Histoire du Papier-Monnaie*, have published many articles on the history of French bills from the late 18th century to the present.

Lafaurie, the leading French numismatist, also has in process of publication the best reference book on the royal coinage of his nation, *Les monnaies des rois de France*, two volumes of which have appeared already (1951; 1956) covering the period up to 1610.

In Italy, although research in ancient numismatics dominates the other fields, attention must be called to an impressive group of studies on medieval and modern Italian numismatics. Francesco and Ercole Gnecchi published an excellent work on the coins of Milan, *Le monete di Milano* (1884–1894), while Nicolò Papadopoli made a similar contribution on the coins of the Venetian Republic, *Le monete di Venezia* (1893–1919). An excellent reference work was published by Count Camillo Serafini, who produced, in *Le monete e le bolle plumbee del Medagliere Vaticano* (1910–1928), an outstanding catalog of the coinages of the popes. Also noteworthy are Ernesto Bernareggi's recent publication on Italian Renaissance coins, *Monete d'oro con ritratto del Rinascimento italiano* (1954), and a greatly needed study on Sicilian coins by Rodolfo Spahr, *Le monete siciliane dagli Aragonesi ai Borboni* (1959). Of exceptional value are *Money, Prices and Civilization in the Mediterranean World* (published in America, 1956), and *Le avventure della lira* (1958), in which the Italian economist Carlo M. Cipolla brilliantly uses coins to guide him through the

Fig. 43.—Count Camillo Serafini (1864–1952) at work in the Vatican Coin Cabinet (author's photo).

economic evolution of Italy and the entire Mediterranean world.

During the last century, numismatics of the Iberian Peninsula continued its centuries-old tradition, and many important works were published, as can be seen in the voluminous Spanish and Portuguese bibliography recently issued by Felipe Mateu y Llopis.[154] The tradition of penetrating deep into the history of a coinage and studying it in connection with contemporary documents was established during the 19th century by Aloïs Heiss (1820–1893), with excellent handbooks like *Descripción general de las monedas hispano-cristianas* (1865–1869). This scholarly tradition was followed by many outstanding Spanish numismatists such as Antonio Vives y Escudero, Casto María del Rivero, José Amoros, Antonio Beltrán Martinez, Adolfo Herrera (*El duro*: *Estudio de los reales de a ocho españoles*, 1914), and Tomaso Dasi, who added to his eight volumes entitled *Estudio de los reales de a ocho* (1950–1951) documents pertaining to the monetary legislation of each period. At present Spain can claim among its experts Prof. Felipe Mateu y Llopis, who has covered in a masterly way the entire field of Spanish numismatics, from the earliest periods of its history up to the present day. He has published a series of basic studies that include such titles as *La moneda española* (1946), *Glosario hispanico de numismática* (1946), and more recently the *Bibliografía de la historia monetaria de España* (1958), mentioned above.

In 1959 Octavio Gil Farrés published *Historia de la moneda española*, a handy reference book on general Spanish numismatics which is annotated with an excellent bibliography. Also noteworthy are the extensive studies by the American George Miles on the period of the Visigoths and Moors in Spain: *The Coinage of the Umayyads of Spain* (1950) and *The Coinage of the Visigoths of Spain* (1952).

Modern numismatic research in Portugal is represented chiefly by Dr. Augusto Carlos Teixeira de Aragão (1823–1903),[155] author of the standard handbook on Portuguese coinages, *Descripção geral e historica das moedas cunhadas em nome dos reis, regentes e governadores de Portugal* (1874–1880). Teixeira de Aragão organized, with the support of King Louis I, the numismatic collection in the royal palace of Ajuda. Other men who have contributed greatly to the development of Portuguese numismatics are José Leite de Vasconcellos (1858–1941), a famous archaeologist and teacher of numismatics, Manuel Joaquim de Campos (*Numismática Indo-Portuguesa*, 1901), Joaquim Ferraro Vaz, author of a very handy reference on Portuguese coins (*Catálogo das moedas portuguesas*, 1948), and Damião Peres. With a study on the coinage of Alfonso V, *Moedas de Toro* (1933), and a major publication in two volumes entitled *Cartilha da numismática portuguesa* (1946; 1955), Pedro Batalha Reis introduced the highest standards into Portuguese numismatic research.

Studies of similar merit can be found in South America, which can claim a series of outstanding publications on Spanish-American numismatics. Many of these works were written by the Chilean José Toribio Medina (1852–1930) under such titles as *Las monedas chilenas* (1902) and *Las monedas coloniales hispano-americanas* (1919).[156] More recently, works of exceptional merit have been Humberto F. Burzio's competent studies on the mints of Potosi and Lima, *La ceca de la villa imperial de Potosi* (1945) and *La ceca de Lima, 1565–1824* (1958), and his already-mentioned dictionary; F. Xavier Calicó's *Aportación a la historia monetaria de Santa Fé de Bogotá* (1953); and Francisco Pradeau's publications on Mexican coinages (1950 and 1957–1961). The latter scholar, an American, first published his study in English in 1938 under the title *Numismatic History of Mexico from the Pre-Columbian Epoch to 1823.*

Numismatic interests are widespread in Latin America. Argentina leads with a series of organizations, where coins are studied and collected, such as the Instituto Bonaerense de Numismática y Antigüedades (with a *Boletín* published since 1942), the Museo Histórico Nacional,[157] the Academia Nacional de la Historia, and the faculty of philosophy at the University of Buenos Aires. Other Spanish-American countries have various organizations formed by collectors or students: in Chile, with a tradition dating back to Medina's time, the Junta Chilena de Numismática and the Circulo de Amigos Numismáticos de Santiago; in Paraguay, the Instituto de Numismática; in Peru, the Sociedad Numismática; in Mexico, the Sociedad Numismática de Mexico, which has published its *Boletín* since 1958. In Brazil, Rio de Janeiro houses an important collection of coins in the

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[154] *Bibliografía de la historia monetaria de España* (1958); see also his "Bibliografía numismática de España y Portugal referente a los siglos VIII a XVI" (1961).

[155] See BATALHA REIS, "História bibliografica da numismática portuguesa" (1946).

[156] See ROBERTS, *José Toribio Medina* (1941).

[157] See *El Gabinete Numismático del Museo Histórico Nacional* (1949).

Museu Historico and at the Sociedade Numismática, which was founded in 1945. Since 1933, the Sociedade Numismática Brasileira in São Paulo has published the *Revista Numismática.*

In Canada, modern numismatics is viewed often as a delightful hobby of collecting national coins and tokens in numerous varieties and the current trend seems to emphasize handy catalogs for collectors. No major study can be found which can compete with the classic works on Canadian numismatics published in the past century by Joseph Leroux, *The Canadian Coin Cabinet* (1888), and by P. Napoléon Breton, *Illustrated History of Coins and Tokens Relating to Canada* (1894). Of great significance are the two collections of documentary sources relating to the financial history of Canada and of Nova Scotia, published in 1925 and 1933, respectively, by Adam Shortt. Since 1950, when the Canadian Numismatic Association was founded, *The C. N. A. Bulletin* (later *The Canadian Numismatic Journal*) has carried many interesting contributions to the national monetary history.

NUMISMATICS IN ASIA AND AUSTRALIA

In order to complete the overall picture in our survey, we should mention the Philippines, Australia, New Zealand, India, and a few other countries in the Far East.

The Philippine Numismatic and Antiquarian Society, with such members as Gilbert S. Perez, Pablo I. de Jesús, José P. Bantug, since 1948 has published many interesting contributions on the numismatic history of the island in a series called Philippine Numismatic Monographs.

Very active numismatic centers are in Australia: the Australian Numismatic Society, founded in 1913, and the South Australian Numismatic Society, founded in 1926. Both organizations publish contributions in their respective journals. An informative bulletin is issued also in New Zealand by the Royal Numismatic Society. Among other noteworthy contributions concerned with Australian numismatics are *Australasian Tokens and Coins* (1921) by Arthur Andrews, *The "Ingots" and "Assay Office" Pieces of South Australia* [1952] by James Hunt Deacon, and the *Foundation of the Australian Monetary System* (1953) by S. J. Butlin.

Although India presents an extremely intricate monetary pattern, it has attracted the attention of scholars since the beginning of the 19th century. These researchers, the majority of them British, tried to master the extremely wide and diversified field of Indian coins through numerous publications of coin material. The seven volumes of the *Catalogue of Indian Coins in the British Museum* (1884–1936) find their parallel in the catalogs of the Indian Museum in Calcutta, of the Panjab Museum in Lahore, or of the Central Museum in Madras, all of these books published by specialists such as Stanley Lane-Poole, Richard B. Whitehead, E. Thurston, and J. Allan.[158] More recently, Indian authors have contributed actively to the *Journal of the Numismatic Society of India.*

Since coins played an important part in China's development, Chinese historians realized at an early stage the importance of numismatic study. The earliest coin catalog (by Liu Ch'ien) is dated as far back as the 6th century A.D., but, unfortunately, it has been lost as also were the works of the next few centuries. During the Sun dynasty (960–1279), numismatists, trying to interpret the early coinage, often indulged in mythological explanations which prevailed in Chinese numismatics for many centuries. The Manchu period (1644–1911) raised this practice to a more scholarly approach, but we can hardly speak of scientific numismatic research until the publication in 1859 of Li Tso-hsien's catalog *Ku ch'üan hui* (Collection of Old Coins), a work profusely annotated with historical notes.

Chinese numismatics in the past two centuries has been described by Mr. Wang Yü-ch'üan: "On the one hand, the collector-numismatists studied the coin specimens but were unable to contribute substantially in deciphering the legends; on the other hand, the epigraphical scholars studied their inscriptions but neglected all other aspects of the coins. Neither group possessed the knowledge of the other, but both contributed toward the advancement of ancient Chinese numismatics. If the knowledge and the interest of both had been combined, numismatic studies in China might have advanced further."[159] Despite this, serious numismatic studies were produced in the first half of the present century: in 1938 Ting Fu-pao published his *Ku ch'ien ta tz'ǔ-tien* (Encyclopedia of Old Coins) in 20 volumes; Kalgan Shih published *Modern Coins of China* in 1949; and the excellent studies of Wang Yü-ch'üan on early

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[158] For additional bibliography, see SINGHAL, *Bibliography of Indian Coins* (1950–1952).

[159] WANG YÜ-CH'ÜAN, *Early Chinese Coinage*, pp. 4–5.

Chinese coins were published in English in 1951 and in Chinese in 1957. Collecting also was widespread and in 1940 the Chinese Numismatic Society was established in Shanghai, where it published a bimonthly periodical until 1945.

In Japanese numismatics, E. de Villaret's "Numismatique Japonaise" (1892) and Neil Gordon Munro's *Coins of Japan* (1904) are sources which are extensively used to the present day. They were joined in later years by *The Old and New Coins of Japan*, a study by Toyojiro Tsukamoto, translated into English in 1930 by Saichiro Itami. The recent publications of the Asahi Shimbunsha (1954), of Masajiro Watanabe (1955), and of Atsushi Kobata (1958), as well as Toyosaburo Araki's works on Japanese paper money, illustrate the intense work done in numismatics by Japanese collectors and scholars.

In the West serious preoccupation with Far Eastern numismatics goes back to the end of the 19th century, when Albert Terrien de Lacouperie, with his *Catalogue of Chinese Coins . . . of the British Museum* (1892), and Sir James Lockhart, with *The Currency of the Farther East* (1895–1898), produced not only excellent handbooks for the western world but also serious contributions to Chinese numismatics in particular. In more recent times these have included the Chinese catalog of the Numismatic Cabinet in Oslo, published in 1929 by Frederik Schjöth, the studies of Arthur Braddan Coole, *A Bibliography on Far Eastern Numismatics* (1940) and *Coins in China's History* (1936), and the excellent contribution of Howard F. Bowker, American author of an extremely useful bibliography. More recently, handy reference books on the modern coinages of both China and Japan have been published by Americans: Edward Kann's *Illustrated Catalog of Chinese Coins* (1954), and *Japanese Coinage* (1953) by Norman Jacobs and Cornelius Vermeule.

Also worth mentioning are excellent publications by Désiré Lacroix (*Numismatique annamite*, 1900), Albert Schroeder (*Annam, études numismatiques*, 1905), as well as the work by Reginald Le May, *The Coinage of Siam* (1932).

MEDALS

The medal, through its implicit artistic character, has never failed to attract collectors and students alike. After the voluminous accumulation of material published by Van Loon and Hennin or gathered in the *Trésor de numismatique*, a more discriminating research set in during the final decades of the 19th century. The national medal and especially the medal of the Renaissance, with its exquisite artistic qualities, drew the interest of scholars. With the classic work of Alfred Armand, *Les médailleurs italiens des XVe et XVIe siècles*, published in 1879, the Renaissance medal became a popular subject. Julius Friedlaender's study of Italian medals from 1430 to 1530, as well as Georg Habich's excellent work *Die Medaille der italienischen Renaissance* (1924) were followed by Sir George Hill's classic *Corpus of Italian Medals of the Renaissance Before Cellini* (1930).

About the same time, the German medal and especially the medal of the period of Dürer found due appreciation. The studies *Die deutsche Medaille in kunst- und kulturhistorischer Hinsicht* (1907) by Karl Domanig, based on the Vienna Imperial Coin Cabinet, and *Die deutsche Schaumünze des XVI. Jahrhunderts*, published in 1929–1934 by Georg Habich in Münich, were great achievements which defined not only the artistic excellence of the German medal but also its historical importance.

This tradition, well established in Paris and Munich, continues to the present day. In France many remarkable publications have came from the pens of Alfred Armand, Ernest Babelon, Ludvig Bramsen, and Fernand Mazerolle. Currently, Jean Babelon is contributing, through his publications (e.g., *La médaille et les médailleurs*, 1927) and exhibitions, to the artistic and historic appreciation of medals. At the coin cabinet in Munich, Max Bernhart (1883–1952), who published the useful handbook *Medaillen und Plaketten* (1919), and Prof. Paul Grotemeyer, still active, have continued the excellent tradition established there by Georg Habich.

Interest in medals is equally high in other countries. Among the outstanding scholars in this field are H. Enno van Gelder in the Netherlands, a country with an appreciation for medals that dates back several hundred years, Eduard Holzmair in Vienna, and Antonio Patrignani in Italy. As a work of unusual merit should be mentioned the *Bibliographical Dictionary of Medallists* (1902–1930), published in eight volumes by Leonard Forrer in London.

Public exhibitions of medals emphasizing historical or artistic subjects have been arranged temporarily in Paris (under the direction of the Paris mint), in Madrid, and in Barcelona. The Coin Cabinet in

Vienna and the Royal Coin Cabinet in Stockholm illustrate in their excellent permanent exhibits the historical and esthetic evolution of medals.

MAJOR COLLECTIONS

Major changes have taken place during the last half century in the development and organization of public collections. Two world wars and the ensuing political tensions could not occur without deeply affecting a discipline which depends so much on international collaboration. While the leading cabinets in London and Paris needed only a brief period for readjustment after the war, the German collections, which had suffered great losses, had to be entirely reorganized. Two major coin collections, the cabinets of Gotha and Dresden, for all practical purposes ceased to exist. The coins of the former were scattered widely, while the treasures of the latter were melted down in great part by Russian occupation troops.

These heavy losses seemed only to spur German scholars on to an intensified activity, and new and modernized exhibits are the result. The Berlin Cabinet, only recently reincorporated into the museum collections after a temporary journey to the Soviet Union, now has a new exhibition, illustrating the history of money, which was arranged in six halls by Arthur Suhle.[160] In Munich, at the Staatliche Münzsammlung, Dr. Paul Grotemeyer is engaged in a similar process of reorganizing the collections and modernizing the exhibits.

The list of major German coin cabinets would be incomplete without adding at least the names of a few museums which have given special attention to ancient and medieval coins: the Rheinisches Landesmuseum in Bonn and in Trier, the Römisch-Germanisches Zentralmuseum in Mainz, the Römisch-Germanisches Museum in Cologne, the Altesschloss Museum in Stuttgart, the Landesmuseum in Münster, and the very active Museum für Hamburgische Geschichte in Hamburg.

In Austria, August von Loehr and Eduard Holzmair continued to direct the activities of the Vienna Cabinet with a first-rate collection of over 400,000 items and a comprehensive exhibit that illustrates paper money and other media of exchange, as well as coins and medals.[161]

In central Europe, Switzerland with important public collections in Bern, Basel, Zürich, Winterthur, and Lausanne, gives evidence of an intensive activity in the field of scholarly research,[162] as well as in a remarkable increase of outstanding private collections.

Similar trends can be noted in Belgium, the Netherlands,[163] and in the Scandinavian countries. Recently, Paul Naster in Belgium published the catalog of a famous collection of ancient coins, *La collection Lucien de Hirsch* (1959), which is part of the Cabinet des Médailles in the Bibliothèque Royale de Belgique. The Statens Historiska Museum in Stockholm, after World War II, opened several halls dedicated to medallic art (fig. 44) and to the history of money in Sweden.[164] Nils L. Rasmusson, the director, has accompanied the exhibit panels with graphic representations of the history of money and prices in Sweden—a striking innovation which illustrates the general tendency to widen considerably the scope of numismatics. Similar in its range is the numismatic research being done in Denmark under the leadership of the senior numismatist Georg Galster. The Kongelige Mønt og Medaillesamling of the Nationalmuseet in Copenhagen has made an outstanding contribution to numismatics in the museum's catalog of Greek coins published within the *Sylloge nummorum Graecorum*, a monumental work initiated in 1941 by Dr. Niels Breitenstein and Prof. Willy Schwabacher.[165]

In the Mediterranean area, Italy follows the general trend and, although the museum activity there gravitates more toward scientific research done by staff members, many new coin exhibits have been opened or planned for the near future. This activity, which can be followed in the columns of the *Annali*, published by the Istituto Italiano di Numismatica

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[160] For a guide to the Berlin collection, see SUHLE, *Führer durch die Schausammlung des Münz kabinetts* (1957).

[161] See LOEHR, *Führer durch die Ausstellung der Bundessammlung* (1935); also *Kunsthistorisches Museum: Führer durch die Sammlungen* (1958), pp. 33–39. For the activities of the coin cabinet in the second quarter of this century, see LOEHR, "Ein Vierteljahrhundert Wiener Münzkabinett" (1958).

[162] MARTIN, "Suisse" (1961).

[163] KUJK, *Geschiedenis van het Kon. Kabinet van Munten* (1946); GELDER, *Koninklijk kabinet van munten* (1954; 1957) and "Les fonctions externes du Cabinet des Médailles de La Haye" (1957).

[164] HECKSCHER and RASMUSSON, *Sveriges mynthistoria* (1958). See also SCHWABACHER, "Die Neueinrichtung" (1950).

[165] See also the guidebook to the Copenhagen Coin and Medal Cabinet, *Mønter og medailler, middelalder og nyere tid* (1950).

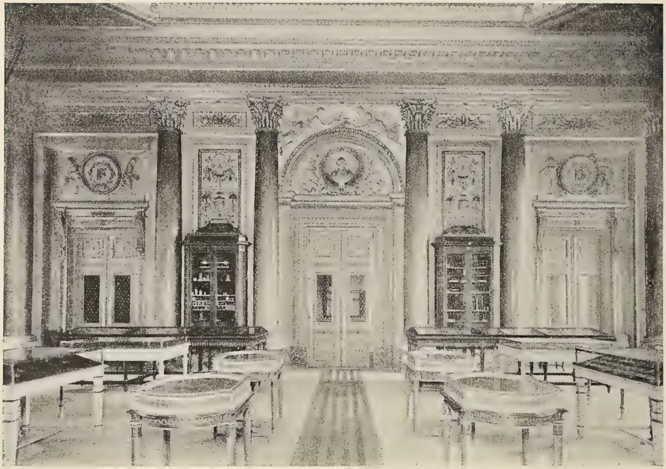

Fig. 44.—Old Elegance and Modern Simplicity in Coin Exhibits—the Mint Museum in Paris and, opposite, the Royal Mint Cabinet in Stockholm (Div. of Numismatics photo, left, and photo courtesy Kunglig Myntkabinettet, Stockholm).

in Rome under the title "Vita dei medaglieri," not only involves major museum centers such as Naples and Rome, but also it spreads far out to Gela, Syracuse, or Palermo in Sicily, and to Milan or Modena in the north.

Spain reaffirms its reputation in numismatics with a series of important publications, outstanding periodicals, and excellent coin exhibits. *Numisma*, published since 1951 in Madrid, and *Numario Hispanico*, issued from the same city since 1952, are only two examples of excellent journals which devote their pages to scholarly research in Spanish and Latin American numismatics. Among the numerous Spanish public coin collections, one should mention at least the old and wealthy accumulation of ancient and medieval coins in the Museo Arqueológico Nacional in Madrid [166] and the Gabinete Numismático de Cataluña in Barcelona, with its very informative exhibit on the history of Spanish and world currencies.[167] At the present time, the Fábrica Nacional de Moneda y Timbre in Madrid is preparing, under L. August and Fernando Gimeno Rúa, a grandiose exhibit on the history of money and medallic art in Spain.

In Portugal, the numismatic tradition of the past centuries finds its expression in a continued interest in building up the public collections. A nation of only a little over eight million people, Portugal can claim the honor of having a national coin museum. Since 1933, the Museu Nacional de Numismatica, housed in the Casa de Moeda in Lisbon, has consolidated most of the outstanding coin collections.[168] In the provinces, the Museu Nacional de Soares dos Reis in Oporto,[169] the coin cabinet at the University of

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[166] For earlier publications of the museum, see Mateu y Llopis, *Catálogo de los ponderales* (1934) and *Catálogo de las monedas previsigodas* (1936); also Rivero, "El Gabinete numismático del Museo Arqueológico de Madrid" (1957).

[167] For the guide to the collection, see Amorós, *Noticia acerca del Gabinete Numismático de Cataluña* (1949).

[168] Batalha Reis, "Museus e colecões publicas" (1946).

[169] For a catalog, see Peres, *Relação das moedas gregas, romanas* (1942).

Coimbra, the collection at the library in Funchal (Madeira), and a collection even in Nova Goya (Goa) are evidence of the interest in and affection for coins in this relatively small Latin nation.

In Israel, the Kadman Numismatic Museum of Tel Aviv, under Arie Kindler, presents a series of exhibits illustrating the monetary history of that nation.

The general upsurge in numismatic interest which took place after World War II can be noted also in countries beyond the Iron Curtain—Czechoslovakia, Poland, Romania, Hungary. The trend there finds expression in several publications centered chiefly around national academies or leading museums and in the general tendency to reorganize public collections,[170] often the major repositories for private collections.

In the United States equal attention has been given to the increase of study and reference collections and to public exhibitions. Many small and large coin exhibits fill show rooms in museums, universities, cultural institutions, and even banks. The American Numismatic Society, with a large specialized staff concentrates mainly on building up its collections,[171] whereas other organizations, such as the Chase Manhattan Bank or the Money Museum of the Detroit National Bank, place their emphasis on exhibitions. The oldest public collection in the country, the cabinet of the Philadelphia Mint, was transferred in 1923 to the Smithsonian Institution in Washington and became part of one of the largest coin collections on exhibit in the United States and perhaps in the entire world. Located in the United States National Museum of the Smithsonian, this exhibit is arranged to illustrate not only the evolution of money in the world but also history as it is reflected in coins. The exhibit is visited yearly by millions of people.

NUMISMATICS IN THE UNIVERSITIES

As an academic discipline, numismatics had an early beginning in 1738 in Halle, Germany, with Johann H. Schulze's "collegium privatum." For a long time afterward, however, the discipline found only scattered acceptance, due in part to the lack of teachers in this field. Occasionally, professors of history or the history of art, such as F. Creutzer in Heidelberg, J. Overbeck in Leipzig, and especially Theodor Mommsen at the University of Berlin, would use coins extensively in their courses. Today Germany continues to lead in this academic tradition. The Universities of Berlin, Hamburg, Munich, Heidelberg, Göttingen, Münster, and Braunschweig offer courses in numismatics.

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[170] Cf. KIERSNOWSKI, "The More Important Public Numismatic Collections of Poland" (1961).

[171] See ADELSON, *American Numismatic Society* (1959).

In most of the other European countries, including eastern Europe and Russia, it is taught at least at the major universities, often as an adjunct of archeology and history, or at the national libraries, along with diplomatics and epigraphy.[172] The history of coins has been taught since 1795 at the Bibliothèque Nationale in Paris, which has had among its professors such men as Millin, Raoul Rochette, and the famous François Lenormant. Portugal introduced the study of numismatics in 1801 at the University of Coimbra, and the Biblioteca Publica in Lisbon, from 1844 to 1911, offered numismatics as a compulsory course for librarians and archivists. The outstanding historian and epigraphist José Leite de Vasconcellos taught there from 1888 to 1911. In Spain, the Escuela Superior de Diplomática in Madrid, since the late 19th century, and the Universities of Madrid and Barcelona, since the early 20th century, have offered courses in numismatics. Their example has been followed by twelve other Spanish universities.

NUMISMATICS IN THE UNITED STATES

We can assume that preoccupation with coins in the American colonies did not differ greatly from that in Europe. Certainly the attention given to classical education in the 18th century would have stimulated an interest in antiquities. Despite scant documentation for the beginning of numismatics in this country, scattered information from the second half of the century helps us to construct a reasonably accurate picture of an ancient science in a young nation.

A certain Swiss gentleman, Pierre Eugene Du Simitiere (1736–1784), who settled in New York and later moved to New Jersey, deposited his collection of about 135 coins with a tradesman as collateral security.[173] It is probable that John Smith, who accepted it, must have heard of or seen similar collections; otherwise, one doubts the good Quaker merchant would have considered obsolete coins as a trustworthy investment.

Another early piece of information is supplied by the diary of the Rev. William Bentley of Salem, Mass., who in 1787 presented to Judge Winthrop of Cambridge some Swedish coins and medals. The diary suggests that Rev. Bentley was one of the early coin enthusiasts in this country; under the year 1791 we find the following entry: "I entertained myself with his [Winthrop's] curious cabinet of coins and medals. It was large and not with any antiques but it had a great variety of small pieces and may be deemed the best we have in this part of the country."[174] The same minister obtained some Chinese coins from a sea captain named West and coins of other nationalities from a Captain Elkins and a Captain Hodges.

It is evident that collecting among intellectuals was not limited to a few isolated cases. By midcentury the "collector-donor" type, the person interested in disseminating knowledge of coins, already had appeared. In 1765 a tutor at Harvard, William Molyneus, donated 250 French coins to the college.[175]

In 1752 the Library Company in Philadelphia received a donation of coins, and later the American Philosophical Society in the same city became the recipient of various collections. An entry in the *Early Proceedings* of the society states, under the date May 15, 1801, that "Mr. Vaughan presented 32 copper coins or medallions from the Soho mint [England] invented by Mr. Boulton with a list and card describing the principles." [176] More interesting are the entries of May 3, 1805, and July 18, 1806, mentioning donations by President Thomas Jefferson. The earlier entry reports that a group of 150 Roman bronze coins, ranging from Augustus to Theodosius, which were given to Jefferson by Weinwich, the Secretary of the Danish Royal Society of Heraldry and Genealogy, was deposited at the American Philosophical Society by the President, who believed "them well worthy its acceptance." [177] Brief entries of such gifts can be found in subsequent years in the *Early Proceedings* of the American Philosophical Society up to 1837, when a committee was assigned to arrange the society's coins and medals.[178]

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[172] Babelon, "Les origines et l'histoire de l'enseignement de la numismatique" (1908); Batalha Reis, "O ensino da numismática em Portugal" (1946); Burckhardt, "Die Numismatik an der Universität Basel" (1958).

[173] Gillingham, "An Eighteenth Century Coin Collector" (1934).

[174] The diary is discussed in an unsigned article, "Oldest Coin Collection Recorded in the U.S." (1907).

[175] Storer, "The Harvard Collection of Coins and Medals" (1922); see also the same title of an unsigned article in *The Numismatist* (1922).

[176] P. 312.

Coins came to be discussed even in the United States Congress. On March 9, 1822, the Joint Committee for the Library submitted a report on a collection of French medals—including some coined in France pertaining to events in the American Revolution—which a certain George William Erving had wanted to present to the Library of Congress. This group of medals apparently had been lost at sea with the brig *Factor*. The interesting point here is that the report recommends the purchase of other medals which had been struck in France and which related to events in the Revolution.[179]

In New York the American Museum of the Tammany Society purchased coins in 1793 and 1796. By 1811 the museum possessed about 300 ancient coins—which, unfortunately, were stolen a few years later.

From these years date the beginnings of the mint collection in Philadelphia. Adam Eckfeldt, chief coiner at the mint, "lead as well by his own taste as by the expectation that a conservatory would some day be established, took pains to preserve master-coins of the different issues of the mint and to retain some of the finest specimens, as they appeared in deposit for recoinage." [180] This same Eckfeldt in 1825 deposited at the Franklin Institute in Philadelphia forty medals which had been struck at the mint.

Philadelphia was proving to be a leading cultural center also in numismatics. In that city, in 1788, James Hall (1773–1861) from Allentown, Pa., made an early start as a collector, expanding his activities in later years by corresponding with numismatists in the old world and by sponsoring the creation of the first numismatic association in America.

In January 1858, eight citizens from Philadelphia "who had long felt the want of such an association, organized a society for the purpose of prosecuting their favorite study in a more systematic and satisfactory manner. The mania for coin collecting was then raging fiercely, and desires had arisen with very many persons to become better acquainted with the science." [181] This is a statement from one of the founding members of the Numismatic and Antiquarian Society of Philadelphia. It is surprising to note the serious trend which coin collecting took in those early days, with people exhibiting such enthusiasm and a tendency to approach numismatics as a science. The diversified interests of this Philadelphia circle are demonstrated clearly in the papers read at the meetings by its members, such as Henry Phillips, Jr., on classical and American numismatics, or Richard Davids, on medieval issues.

Shortly after the Philadelphia society was organized, a second association was formed in April 1858 in New York by a group of collectors under the leadership of Augustus Sage, a well-known coin dealer. The New York American Numismatic Society, which temporarily changed its name in 1864 to American Numismatic and Archaeological Society, was represented by an extremely active group of people "prominent in civic affairs" like Edward Groh, Dr. J. H. Gibbs, and H. Whitmore.

Joseph N. T. Levick (1831–1908), supported by a few others, promoted the idea of a periodical, and in 1866 he initiated the publication of the *American Journal of Numismatics*. The purpose of this journal was defined by one of its founders as resting on the fact that "all this time there has been no publication attempted which, besides being of historical value, should act as check upon all nefarious and improper acts, either in the manufacture, collection, or sale of coins and medals." [182]

A series of similar organizations sprang up—in 1860, the Boston Numismatic Society; in 1864, the Rhode Island Numismatic Association in Providence, followed by the Vermont Numismatic Society in Montpelier, and the Western Pennsylvania Numismatic Society in Pittsburgh. The respective constitutions and bylaws were published as follows: Boston, 1867; Providence, 1865; Montpelier, 1877; and Pittsburgh, 1883. All of these groups attest to the steadily increasing interest in coin collecting in the eastern states. To them might be added the Numismatic and Antiquarian Society of Montreal, established in 1863 in Canada.

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[177] Ibid., p. 374.

[178] Ibid., pp. 387, 464, 659, 670, 705; see also Phillips, *Notes Upon the Collection of Coins . . . Deposited by the Numismatic and Antiquarian Society* (1885).

[179] U.S. Congress, "Report of the Library Committee" (1822).

[180] Du Bois, *Brief Account of the Collection of Coins*, p. 6.

[181] *Proceedings* (1867), p. 3.

[182] Issue of May, 1866, p. 1.

Intense activity in collecting and studying the most diversified categories of coins from all over the world now set in. Still very strong was the interest in early coinages, with special preference given to the Roman. At the same time, however, there could be observed a growing preoccupation with the national coinage. The reports of the meetings of the numismatic associations accurately reflect this general trend. We learn, for example, that in the Boston circle, one of the most traditional and representative groups on the East Coast, William Sumner Appleton (1840–1903), possessed a remarkable collection which was well-defined both in the classical and in the American field. This collection today is housed in the Massachusetts Historical Society. Jeremiah Colburn (1815–1891), editor of the *American Journal of Numismatics* after 1871, F. G. Seavy of Boston, and Robert C. Davis of Philadelphia, all had authoritative collections of American coins.

A distorted picture of numismatics in the United States would be given if the implication emerged that interest was limited only to the eastern coast. Contemporary accounts in the 1860s—from Fort Wayne, Ind., concerning a miscellaneous collection of 2,000 pieces; from Bellevue, Ohio, where a collector was robbed of his "copperheads"; from Omaha, Neb., where Byron Reed assembled an outstanding collection of ancient, modern, and American coins; and a report of J. Henry Applegate on the situation in collectors' circles in California—indicate the extent of numismatic interest in the central and western states, which until recently was not channeled into well-organized efforts as in the East.

Throughout the country, at the same time, scores of handbooks and publications on a variety of other numismatic subjects were started, reflecting research of the midcentury which often centered around the paper currencies of colonial times. Such efforts probably were motivated, in part, by a desire to evaluate the unfortunate financial experiences of the preceding century.

Among other publications of the period should be mentioned William M. Gouge's *Short History of Paper Money and Banking in the United States* (1833), William Sumner's *History of American Currency* (1874), and especially Joseph B. Felt's *Historical Account of Massachusetts Currency* (1839), which was developed from two lectures given before the Massachusetts Historical Society. In a few decades, Henry Phillips published his excellent *Historical Sketches of the Paper Currency of the American Colonies* (1865–1866), which is still an indispensable reference.

Around the middle of the century, research on coins was largely dominated by people connected with the national mint: Jacob R. Eckfeldt (1803–1872) [183] and William E. Du Bois (1810–1881),[184] assayers, and later in the sixties, James Ross Snowden (1809–1878), director of the Mint in Philadelphia. *The Manual of Gold and Silver Coins of All Nations Struck Within the Past Century*, published in Philadelphia in 1842 by Eckfeldt and Du Bois, is, in spite of omissions, an outstanding handbook. Although not pursuing high scholarly standards, this book, which contains detailed descriptions of the coinage of every country with useful accompanying tables on the metallic fineness of coins resulting from their own assays, was an invaluable aid for collectors.

In 1846 Du Bois published *A Brief Account of the Collection of Coins Belonging to the Mint of the United States*, in which he gives, in addition to a conspectus of the various groups of coins represented, a short history of the national collection. Later, in 1860, James R. Snowden published a more detailed report under the title *Description of Ancient and Modern Coins in the Cabinet Collection of the Mint of the United States*.[185] The collection of the Mint was established officially in June 1838 although, as we have seen already, its early beginnings can be traced to the 1790s. Du Bois' book mentions the provenance of certain pieces: a few ancient coins were given by Jacques G. Schwarz, U.S. Consul in Vienna; some Byzantine and Greek pieces were donated by John P. Brown, dragoman for the U.S. Embassy in Constantinople; and a number of Greek and Bactrian coins came from the East India Company.

In 1845, John L. Riddell, melter and refiner at the U.S. Branch Mint in New Orleans, published in that city *A Monograph of the Silver Dollar, Good and Bad*, a book which reflects the preoccupations of the period with actual monetary problems.

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[183] See Du Bois, "A Brief Sketch of Jacob R. Eckfeldt" (1872).

[184] See obituary of William E. Du Bois in *American Journal of Numismatics* (1881).

[185] For other catalogs of the Philadelphia Mint collection see Johnston, *A Visit to the Cabinet* (1876); Smith, *Visitor's Guide* (1885); McClure, *An Index to the Coins* (1891; 1895); U.S. Bureau of the Mint, *Guide to the Collection* (1913), *Catalogue of Coins* (1912; 1913; 1914) and *Catalogue* (1928).

The *Manual* by Eckfeldt and Du Bois, mentioned above, found a parallel work in Montroville W. Dickeson's *The American Numismatic Manual* (1859), which, despite the criticism it received, went through three editions by 1865. As faulty as much of the information was, the basic concept of the book helped it to achieve a standard which was never equaled in later publications of this kind.

The New York group claimed as its leading men Charles I. Bushnell (1826–1883), a well-known collector and author of a book on tokens, *An Arrangement of Tradesmen's Cards, Political Tokens, etc.* (1858), and John Howard Hickcox, author of *An Historical Account of American Coinage* (1858).

But the classic work on American numismatics was yet to come. In 1875 *The Early Coins of America and the Laws Governing Their Issue* was published in Boston by Sylvester S. Crosby, a jeweler from New Hampshire who had established his business in Boston. This work can be regarded as the most outstanding contribution of the United States to numismatic research in general.

In this book one of the thorniest problems in the history of American coinage, the issues of the Colonies, found an authoritative presentation which has never been surpassed. The basic concept of the work was to consider coins as essentially an expression of their time. They were thoroughly examined in the light of contemporary documents and their sequence was established through detailed die studies. Crosby's system of submitting the coin image to a painstaking examination, noting the minutest changes in the die as a clue to assigning the sequence within a given group of coins not otherwise datable, proved invaluable in many instances and frequently was used by other numismatists. Unfortunately, from a means his system has very often become an end in itself, its use degenerating into a senseless pursuit, as can be seen in recent publications which promote research into the progression of die cracks as an exclusive aim of numismatics—an activity which entirely neglects Crosby's historical approach.

A strong interest in medals toward the end of the century emerged again; they were studied from the historical rather than the artistic point of view. Nonetheless, Joseph F. Loubat's *Medallic History of the United States of America, 1776–1876* (1878) cannot fail to impress the reader with its artistically executed plates. A few years later, William S. Baker published the results of his research on portraits of the first American president in his *Medallic Portraits of Washington* (1885). In the same period Charles W. Betts (1845–1887) achieved a solid reputation with his *American Colonial History Illustrated by Contemporary Medals* (1894).

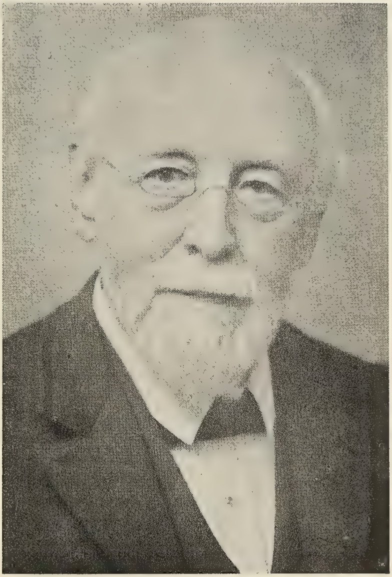

Fig. 45.—Sylvester Sage Crosby (d. 1914), American numismatist (photo from *The Numismatist*).

Large and highly specialized collections were formed near the close of the century, and many rarities sold in Europe found their way to this country. The collections of classical coins of Frank S. Benson, Clarence S. Bement, and J. Pierpont Morgan were a challenge to the best collections on the continent. Enrico Caruso's cabinet of gold coins and Waldo C. Newcomer's collection of South American gold and silver coins were among the largest of their kind ever assembled.

In the field of American coins the number of cabinets grows to such an extent it would be impossible to give more than a selection. The sale catalogs of the period, such as those published by the Chapman firm in Philadelphia, disclose many collectors who built significant cabinets. In 1889 there were over four hundred American collections which were known in Europe, as reported in *Guida numismatica universale*[186] by Francesco and Ercole Gnecchi. Among the early collections should be mentioned the coin cabinets of Joseph J. Mickley[187] of Philadelphia and of Matthew A. Stickney of Salem, Massachusetts.

Of special interest are the donations made to cultural institutions, colleges, and public libraries. Emmanuel J. Attinelli's *Numisgraphics, or List of Catalogues* (1876) and a recent report (1960) from the International Numismatic Commission, include many such recipients, among which are historical societies in New York, Philadelphia, Long Island, Massachusetts, Missouri, and Wisconsin, the Mercantile Library Association in St. Louis, the New York State Library in Albany, the Hartford Connecticut State Library, the Omaha Public Library, as well as many universities and colleges.

Through donations of entire, well-rounded collections or single groups of coins, many colleges have accumulated excellent study material. Harvard's more select ancient coins have been published by George Hanfman and Miriam S. Balmuth in a very attractive booklet entitled *The Fogg Art Museum of Harvard University: Ancient Coins* (1956). In Washington, Dumbarton Oaks, under the trusteeship of Harvard, has an outstanding collection of late Roman and Byzantine coins and gold medallions, which were published in 1958 by Prof. Alfred Bellinger.[188] Bryn Mawr College has a remarkable collection of Greek coins which have been cataloged by Cornelius Vermeule and reported in his "Greek Coins in the Elizabeth Washburn King Collection" (1956). The *Numismatist* of 1927 in a brief note mentions the collection of 10,000 coins which the Rev. W. H. Owen gave to Yale. Earlier accounts of such donations at Yale can be found in *Roman Family Coins in the Yale College Collection* (1860) by Fisk P. Brewer and especially in the *Catalogue of the Cabinet of Coins in the Yale Collection,* published anonymously in 1863 and reissued by Jonathan Edwards in 1880 as the *Catalogue of the Greek and Roman Coins in the Numismatic Collection of Yale College.* The collection in Yale's Sterling Memorial Library is exceptionally well represented in classical coins, including also many rarities in the United States series from the Francis P. Garvan collection. Recently, Margaret Thompson and Alfred Bellinger published an account of a hoard of Alexander drachms from the Yale collections.[189] Dartmouth College has had two recent numismatic publications on Roman and on Byzantine gold coins.[190] Johns Hopkins University (which received the famous J. W. Garrett Collection), Princeton, Columbia, Vassar, St. Louis, the University of Wisconsin, the Oriental Institute of the University of Chicago, the Berkeley branch of the University of California, the University Museum in Philadelphia,[191] all are in possession of old and important collections.

Often, universities sponsor numismatic studies in connection with their publications in economics or as a part of the reports on archeological expeditions. Since the late 19th century, Johns Hopkins University has issued many interesting studies in economics—some of which relate to the history of money and prices—in two series: Studies in History and Political Sciences, and Ancient Economic Studies. Many reports on coin finds from archeological excavations under the direction of colleges and universities have been published by such authors as Edward T. Newell (for the excavation at Dura-Europos), David M. Robinson (Olynthus), Margaret Thompson (Corinth and Athens), Dorothy H. Cox (Curium and Gordion), and especially Prof. Alfred Bellinger (Corinth and Dura-Europos, among many others).

American universities sometimes make use of numismatics—if only tangentially—especially in the classical area. In the United States, the general subject is not part of the regular curriculum, but some institutions of higher learning occasionally offer lectures on numismatic problems, as Columbia University did in 1908, when Prof. T. Whittemore presented a course on coins as they are related to classical art. Since history professors sometimes are involved personally in numismatic research, coins and medals occasionally are used in history and art classes. In recent years the American Numismatic Society has provided annual summer seminars for university graduates who are interested in numismatics as an independent discipline or as an area related to their historical research.

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[186] Second edition, pp. 419–454.

[187] For a biography, see Du Bois, *J. Mickley: The Interesting Career of a Linguist, Antiquarian, and Musician* (1878).

[188] See Bellinger, "Roman and Byzantine Medallions in the Dumbarton Oaks Collection" (1958).

[189] Thompson and Bellinger, "A Hoard of Alexander Drachms" (1955).

[190] See Stearns and Hall, *Byzantine Gold Coins from the Dartmouth College Collection* (1953); Terrace, *Some Historical Roman Coins . . . at Dartmouth College* (1958).

[191] See, for example, Miles, *Fatimid Coins in the Collection of the University Museum, Philadelphia* (1951).

Toward the latter part of the 19th century the number of new periodicals increased noticeably. A general list should include the *Coin Collector's Journal*, founded by J. W. Scott and E. Frossard in New York City in 1875 and continuing until 1954, and *Numisma*, issued from Irvington, N.Y., from 1877 to 1891. Most of these periodicals, however, were short-lived: *Numismatic Pilot to Ancient Coins and Their Uses* (La Grange, Ky., 1876–1877), *Coin and Stamp Journal* (Kansas City and New York, 1875–1877), *The Numismatic Journal* (North Adams, Mass., 1877–1878), *Coin Journal* (Lancaster, Pa., 1878–1882), and *Mason's Coin and Stamp Collector's Magazine* (Philadelphia, 1867–1872). With the exception of the *American Journal of Numismatics*, a more advanced periodical—edited first by the Boston Numismatic Society and later by the American Numismatic Society in New York from 1866 to 1924—the purpose of most of these journals was to serve the collector in his basic need for communication and exchange of information.

Proceeding on this premise, a small journal called *The Numismatist* was started in 1888 by Dr. George F. Heath of Monroe, Mich. His ambition to create closer contacts among collectors materialized in an organization called the American Numismatic Association. This society, numbering today over 20,000 members, was begun in Chicago on October 7, 1891, by six men. Its official publication, *The Numismatist*, with a widely diversified content, is the most important periodical for the American collector who is interested in every field of collecting. Enjoying a wide distribution is another very popular magazine, *The Numismatic Scrapbook*, issued since 1935 from Chicago.

Although interest in collecting United States coins has been extremely keen in the past eighty years, numismatics as a science seems to have been forgotten or confined to the work of economists. Descriptive catalogs of various denominations and their varieties, such as Martin L. Beistle's *Register of the Half Dollar Die Varieties and Sub-Varieties* (1929) or Howard Newcomb's *United States Copper Cents, 1816–1857* (1944), outnumbered the more historical studies like Bauman Belden's *Indian Peace Medals* (1927). More prevalent, however, were studies on ancient and foreign numismatics, such as Agnes Brett's *Electrum Coinage of Lampsakos* (1914), and Albert Frey's *Dictionary of Numismatic Names* (1947), as well as comprehensive works on the general currencies of the United States, such as A. Barton Hepburn's *History of Coinage and Currency in the United States* (1903) or C. Nettel's *Money Supply of the American Colonies Before 1720* (1934). The study of Confederate currency as reflected in Raphael P. Thian's very rare *Register of Issues of Confederate States Treasury Notes*, published in the late 19th century, again became popular in 1915 with William W. Bradbeer's *Confederate and Southern State Currency*. The subject was reexamined in 1947 by Philip H. Chase in *Confederate Treasury Notes: The Paper Money of the Confederate States of America* and in 1954 by Richard C. Todd in his excellent historical study *Confederate Finance*.

Fig. 46.—Albert R. Frey (1858–1926), American author of *Dictionary of Numismatic Names* (photo from *The Numismatist*).

In the early decades of the twentieth century emerged a man who succeeded in establishing the prestige of American research in the field of scientific numismatics—Edward T. Newell (1886–1941), Yale graduate and, from 1916 until his death, president of the American Numismatic Society. A distinguished student of outstanding reputation in the numismatic world, he revolutionized the field of ancient Greek numismatics by regrouping and redating certain coinages of Alexander the Great on an entirely new and scientific basis.

At the same time he set in motion a publishing trend which helped to place the United States among

EDWARD T. NEWELL

Fig. 47.—EDWARD T. NEWELL (1886–1941), leading American authority in ancient numismatics (Div. of Numismatics photo).

the leading nations in numismatic research. On his initiative the American Numismatic Society began to publish in 1920 various studies in a series called Numismatic Notes and Monographs. To this title subsequently were added others: in 1938, Numismatic Studies, a series devoted to works of larger size; in 1946, *Museum Notes*, an annual confined to brief articles written chiefly by the museum staff; in 1947, *Numismatic Literature*, an excellent bibliographical review; and in 1950, the Hispanic Numismatic Series, a joint publication in cooperation with the Hispanic Society of America.[192]

As a result, in subsequent decades many outstanding works in the field of ancient and foreign numismatics have been published. Newell's classic studies, *The Coinage of Demetrius Poliorcetes* (1927), *The Coinage of the Eastern Seleucid Mints* (1938), and *The Coinage of the Western Seleucid Mints* (1941),[193] were followed by a series of excellent monographs by Sydney P. Noe, Alfred Bellinger, Samuel R. Milbank, and Louis West in the field of ancient numismatics. In order to complete the picture, one should add a few representative names in various other specialties: George C. Miles on Islamic and Ibero-Hispanic coinages, Howland Wood and Robert Nesmith on Central and South American problems, Harrold E. Gillingham and James C. Risk on orders and decorations, William H. Dillistin and Kenneth Scott on bank notes and counterfeiting, and Sydney P. Noe and Eric Newman on American numismatics.

In reviewing the past few decades of numismatic research in this country, one cannot escape the impression that almost all scholarly activity has been centered around the publications of the American Numsimatic Society. Even in the field of national numismatics only sporadic and unsystematic attempts have been made by other groups to direct research toward higher scholarly standards. Walter Breen's many contributions to various topics of American interest have not yet been channeled into a major historical study.

On the other hand, the United States has produced excellent handbooks which are a genuine asset to general numismatics on the collector's level. Wayte Raymond has published a series of guidebooks on modern world coinages of the 19th and 20th centuries as well as on United States coins.[194] His tradition has been continued by Richard S. Yeoman with a yearly edition on the United States series,[195] and now extended by Yeoman to modern foreign coinages (*A Catalogue of Modern World Coins*, 6th ed., 1964). Robert Friedberg's *Gold Coins of the World* (1958) and especially his handbook *Paper Money of the United States* (5th ed., 1964) present many useful features for collectors. Worldwide acceptance has been accorded to John S. Davenport's handbooks on the dollar-sized silver coins of Europe and Germany since 1700.[196]

More scientifically significant contributions have come from the Economics Department of the University of Pennsylvania, with such works as Anne Bezanson's *Prices and Inflation During the American Revolution* (1951), and from the Harvard Department of Economics, as reflected in the series Harvard Economic Studies. Both have published special studies concerned with historical aspects of monetary and price problems and with banking in Europe as well as in the early periods of this country.

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[192] For more detailed information, see ADELSON, *American Numismatic Society* (1958).

[193] For his bibliography, see *The Numismatist* (1941), pp. 268–269.

[194] *Coins of the World: Nineteenth Century Issues* (1953), *Coins of the World: Twentieth Century Issues* (1955), *Standard Catalogue of United States Coins* (1957).

[195] *Guidebook of the United States Coins* (1963).

[196] *European Crowns Since 1800* (1947), *German Talers Since 1800* (1949), *German Talers 1700–1800* (1958), *European Crowns 1700–1800* (1961).

For new perspectives on research into American numismatics we have to turn to the Numismatic Notes and Monographs series of the American Numismatic Society. Sydney P. Noe's studies on the early coinages of Massachusetts and on the Castine hoard [197] and the brilliant studies of Eric Newman on other topics of colonial numismatics [198] have opened a new and promising era for scientific research into American currency.

Numismatics as the science of money viewed within the multiplicity of historical phenomena appears to be successfully established. The words written a century ago by James Ross Snowden seem best to express our thoughts:

> In giving a history of the coins of the United States we shall not go so far into the details of the subject as to take notice of the different "varieties" caused by cracked dies, the addition or omission of a leaf in the laurel, a larger or smaller letter in the legend or inscription, and the countless other minute and scarcely definable differences which are found, upon close inspection, to exist in the coins of nearly every year in which they have been issued. These little technicalities may be important to those collectors of coins who pay more regard to the selfish desire of having something which no one else possesses than to the historic or artistic interest which attaches to a coin. We therefore confine ourselves to an illustration of those changes in the types of the coins which are of material and definite character, and which are produced by design and not by accident, introducing, as we proceed, other facts in regard to the coinage which are more purely historic than the description, and which may be of interest or tend to throw some light upon controverted points.[199]

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[197] *New England and Willow Tree Coinage of Massachusetts* (1943), *Oak Tree Coinage of Massachusetts* (1947), *Pine Tree Coinage of Massachusetts* (1952), *The Castine Deposit: An American Hoard* (1942).

[198] *Coinage for Colonial Virginia* (1956) and *Secret of the Good Samaritan Shilling* (1959).

[199] *Description of Ancient and Modern Coins*, p. 101.

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ITALIAN COIN ENGRAVERS

SINCE 1800

Elvira Eliza Clain-Stefanelli

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ITALIAN COIN ENGRAVERS SINCE 1800

By Elvira Eliza Clain-Stefanelli

INTRODUCTION

> Un phénomène qui est d'abord économique puis qui s'élargit dans le domaine de l'esthètique.
> —Jean Babelon, *La médaille et les médailleurs*

This study is concerned with coins as works of art. It may seem unusual to approach such objects of daily use—regarded popularly as the quintessence of crudest materialism—in esthetic terms. Nevertheless, coins are a direct and sincere expression of their time and are often true reflections of the artistic concepts of a period as they filter through the personality of an artist.

It is customary to regard only coins from earlier periods of history as creations of art and to deny this characteristic to contemporary productions. Essentially, however, there is little difference between an ancient and a modern coin. Both are frank expressions of their age. But there is some weight to the former view. While in classical times the ideal of beauty formed an integral part of everyday life, in the modern world a more utilitarian ideal predominates—a fact which is often reflected in coins. With technical progress and its emphasis on mechanical processes there has come a neglect of spontaneity in expression. Despite this, however, many modern coin engravers have succeeded in giving an artistic interpretation to even the coldest and most official pattern, and their work must be considered in terms of genuine art.

The modern coinage of Italy presents many interesting problems, among them the investigation of how a country in which a strong art tradition had existed since ancient times met the challenges which its own period presented and how that country competed with the contemporary art of other nations, especially France. It is interesting to observe also how tradition, that sometime beneficent guide for new generations, can become a merciless tyrant which annihilates spontaneity, one of the most desirable qualities in art. A related problem lies in discovering how Italian artists tried to satisfy the quest for innovation, how they attempted to get away from established patterns, and where they directed their attention for new inspiration.

To appreciate the creative process of each coin engraver, to understand his personality, his problems, and to evaluate his creations as esthetic reflections within a historical framework is the theme of the present study. This primary motif is shifted at times to a more detective-like process of trying to identify, along lines of stylistic peculiarities, the various artists who worked anonymously on a certain coinage.

For reasons of space this is necessarily a selective study. It is not a complete series of the artists of the period nor is it a complete listing of each man's work, but rather it presents the major figures and their more representative productions. In general, the large silver and gold coins are given preference, with attention centered on portraits, since the latter, in fact, are considered the ultimate test of a coin engraver's perception and skill in transmuting esthetic and human values into harmonious creations. Medals as a rule are neglected because their wide variety surpasses the limits of this study; they are occasionally included to cast light upon certain aspects of a particular artist, and many times only one side is necessary for this purpose. In the discussion of Neapolitan medals, illustrations are drawn from publications by Ricciardi and Siciliano and not from the famous collections in the Naples Museum since these are only now in the process of being published. Unless otherwise noted, the illustrated coins and medals are actual size. Many of the coins are in the national collection of the Smithsonian Institution. Sources of the photographs are indicated with each legend. The author is grateful to the American Numismatic Society for supplying many photographs and to Mr. Joseph Bowen and Mr. James Duggins of the Smithsonian photographic division for their work.

TURIN

At the beginning of the nineteenth century, Italy, then only a group of independent states governed by local and foreign dynasties, was on the threshold of a tumultuous era. New political ideals had arisen, inspired in part by the ferment of the French Revolution and the Napoleonic wars. In a few decades dedicated men like Mazzini, Garibaldi, Victor Emmanuel II, and Count Camillo Cavour proclaimed, on the basis of these ideals, the political credo of their generation and after many battles welded Italy into a united kingdom.

The cultural development, as a reflection of the political destinies of these various Italian states, followed a tradition often determined only by dynastic interests and usually antagonistic to the nationalistic spirit. Artistic creations, and among them the work of the coin engravers, followed the general spiritual trend, each monarchy with its own groups of artists working independently. Until Victor Emmanuel II, assisted by Count Cavour, succeeded in forging the political unity of the country with Rome as the capital, at least four major intellectual centers were discernible: Turin, Milan-Venice, Rome, and Naples.

Turin, because of its geographical position, drew its inspiration from Paris, where for centuries the art of engraving had been cultivated and where it had been brought to a high degree of perfection. The cult of personality cherished by Louis XIV and Napoleon Bonaparte had found able proponents in engravers like Augustin Dupré, Jean Pierre Droz, and Pierre Joseph Tiolier. The portraits of each ruler, distant and imposing in their godlikeness, assumed various forms of expression. During Louis XIV's time the pomp of the exterior adornment on the figure gave majesty to the rather impersonal and remote likeness of the king, while, later, Tiolier's art succeeded in expressing an exalted image of the ruler with the simplicity of neoclassicism and the psychological insight of the post-Rousseau period.

This direction in art, along with all the other neoclassical tendencies of Napoleon I, found a ready acceptance beyond the Alps, where the cult of perfection of form, with its noble simplicity, already existed in a tradition filtered through the Renaissance from classical times. During the Empire period Italian engravers rivaled their French colleagues in rendering homage to Napoleon, and his portrait was the subject of many outstanding Italian artists. Manfredini's bust of Napoleon (Fig. 7) can be considered a real challenge to Tiolier's portrait of his Emperor (Fig. 8).

FOOTNOTES

Single citation in footnote indicates supporting reference. Plural citations indicate the standard sources for description of the coin or information about the artist.

All footnotes are in shortened form. Complete references are cited at the end of this paper.

Book abbreviations

BDM=*Biographical dictionary of medallists* by Leonard Forrer

CNI=*Corpus nummorum Italicorum*

RZ=*Relazione della Reale Zecca*

CagS=*Supplemento alle monete del Reame delle Due Sicilie da Carlo I d'Angio a Vittorio Emanuel II* by Memmo Cagiati

Periodical abbreviations

BCNN=*Bollettino del Circolo Numismatico Napoletano*

IN=*Italia numismatica*

NCirc=*Numismatic Circular*

NumR=*Numismatica* (Rome)

RasN=*Rassegna numismatica* (title varies)

RIN=*Rivista italiana di numismatica*

Among the group of distinguished artists working during that time in Turin were the Lavy brothers.

Amedeo Lavy[1] (1777–1864) was descended from a French family of engravers and sculptors who had been established since the early seventeen-hundreds in Piedmont. His father Lorenzo, who studied in Paris with Pierre Germain, the goldsmith of the Royal Court, worked later as coin and medal engraver at the Turin mint. He left an impressive series of dies for a medallic history of the Savoy family, *Storia metallica della Real Casa di Savoia*. The older son Carlo Michele[2] (1765–1813) after studying a few years in Paris, also worked, after 1789, at the Turin mint. Amedeo Lavy, the younger and more fortunate brother, led a highly diversified life. Well known as a sculptor of portrait busts, statues, and terra cottas (for the church in Castagnola), as an engraver of coin and medal dies, and as a designer of stamp and currency vignettes and of playing cards, his renown remained widespread and his popularity constant even during the changing regimes of the Savoy kings and Napoleon.

Lavy started at the age of thirteen as an apprentice in the Turin mint, later completing his studies at the Academy of Fine Arts. One of his first works was a copy of a portrait of Queen Christina of Sweden (1794). Two years later he engraved the dies for the coinage of Charles Emmanuel IV of Savoy. The vicissitudes of the Napoleonic wars brought him into close contact with opposing factions, and he put his art at the service of them all. During the War of the Second Coalition (1799–1801) against France, he had the opportunity to see the Russian Commander Alexander Suvaroff and to model Suvaroff's portrait in wax. A year later (1800) the French general André Massena had his portrait done by Amedeo Lavy. In the same year Lavy engraved the portrait of the First Consul on a medal celebrating Bonaparte's decisive victory at Marengo. The 20-franc piece issued by the Subalpine Republic in commemoration of the same victory (fig. 3) was also engraved by Lavy, who mentions it in his diary.[3] In 1801 he was elected member of the Subalpine Academy of History and Fine Arts and in 1805 he left for Rome to perfect his technique in sculpture and engraving.

In Rome Lavy worked under the direction of Antonio Canova[4] for over a year, but a pulmonary disease forced him to return to Turin. During the subsequent years he continued unabated his work as a sculptor and especially as a portraitist. After the return of Victor Emmanuel I, Lavy devoted his entire activity to the glory of the Savoy king. A continuous succession of coin dies, medals, seals—he engraved the great seal of the state in 1815—were the result of these fruitful years. In 1817 he prepared drawings and projects for the proposed decimal system. In 1821, with the restoration of Charles Felix, he modeled the new king's portrait (fig. 5) in only two sittings, preparing all the dies for the new coinage. This prodigious activity brought Lavy widespread fame, and in 1823 he was appointed a member of the Accademia di S. Luca in Rome. But the recognition given to him by the world apparently was not the same which he received at home in Piedmont. From his diary we gather that he had administrative difficulties at the Turin mint. He was forced to ask for his retirement in 1825. One year later he obtained an annual pension of 2,400 lire and discontinued his activity at the mint, where, he noted with bitterness in his diary, members of his family had held the position of chief engraver for almost a hundred years.[5]

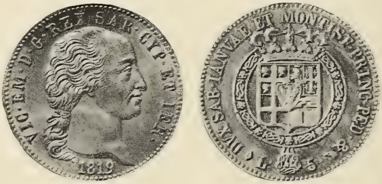
Fig. 1.—Sardinia, Victor Emmanuel I, 5 lire, 1819[6]
(Photo courtesy American Numismatic Society)

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[1] *BDM*, vol. 3, pp. 347–349, and vol. 7, pp. 538–539; Thieme and Becker, *Allgemeines Lexikon*, vol. 22, p. 480; Bolzenthal, *Skizzen zur Kunstgeschichte*, p. 304; Assandria, *Atti della Società Piemontese di Archeologia e Belle Arti* (1916), vol. 8, fasc. 4, pp. 209–274.

[2] *BDM*, vol. 3, p. 349; Thieme and Becker, vol. 22, p. 480; Bolzenthal, pp. 303–304.

[3] "Ho inciso la pezza in oro Marengo . . . e lo scudo di L. 5 uniformandomi al sistema decimale come quello della Francia" —Assandria, p. 247.

[4] "Canova veniva sovente a corregermi"—ibid., p. 249.

[5] Ibid., p. 260.

[6] *CNI*, vol. 1, p. 441, coin 14; Pagani, *Monete italiane*, coin 321.

Inspired in his work by the genius of Antonio Canova and by the neoclassical style, as well as by the art of the engravers of Greek antiquity, Amedeo Lavy achieved a mastery of form necessary to express his concepts in nobleness and simplicity.

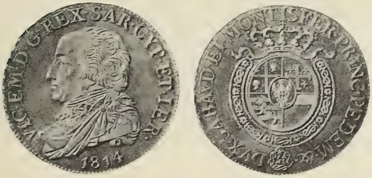

Fig. 2.—SARDINIA, VICTOR EMMANUEL I, half scudo, 1814 [7]
(Photo courtesy American Numismatic Society)

Works from the earlier period of his life can be judged as some of Italy's best coin dies. The portrait coin of Victor Emmanuel I of Savoy (fig. 1) and especially the bust represented on the half scudo of 1814 (fig. 2) achieve excellence through the majesty of their conception. The subtlety of details in rendering the character of the aged monarch, as well as the sense of proportion expressed in the entire composition, confer distinguished beauty on one of the most remarkable Italian coins of the 19th century. A Canova portrait medal engraved in 1810 [8] expresses this same simplicity and purity of form.

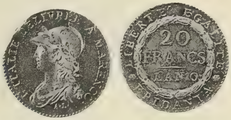

Fig. 3.—ERIDANIA, SUBALPINE REPUBLIC, 20 francs or Marengo, year 10 [1802] [9]
(Div. of Numismatics photo)

As a complement to Lavy's portrait achievements may be mentioned his allegorical compositions, of which the Liberty bust on the so-called "Marengo" or 20-franc piece of Eridania (fig. 3) is the best example.[10] The well-balanced composition of this coin may be encountered also in another creation of the same year, the 5-franc piece of Eridania (fig. 4).

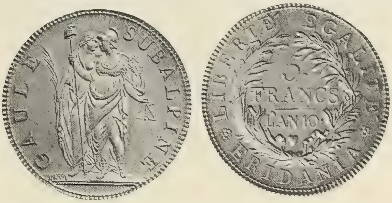

Fig. 4.—ERIDANIA, SUBALPINE REPUBLIC, 5 francs, year 10 [1802] [11]
(Div. of Numismatics photo)

On this coin the vertical arrangement of the composition is strengthened by the massive group of two allegorical figures in opposition to the circular motif of the reverse.

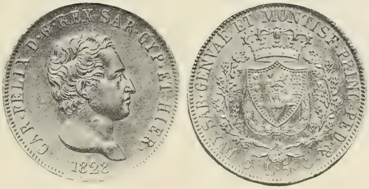

Fig. 5.—SARDINIA, CHARLES FELIX, 5 lire, 1828, Genoa mint [12]
(Div. of Numismatics photo)

Regrettably, Lavy's artistic devotion did not continue with time, and in later years his style, clinging faithfully to old patterns of composition, declined toward mannerism. His portrait of Charles Felix of Savoy (fig. 5) is only a pale reflection of his one-time keenness of psychological finesse. This bust denotes common traits which identify it as a Lavy creation, but it seems that a tired hand could no longer inspire with life the conventional lines of an official portrait. One can speculate that this lack of insight may be attributed to a weariness from the excessive amount of work which he had been forced to master during those years—when, overcrowded with commissions, he could have lost spontaneity and adopted instead the more convenient forms of routine—or perhaps to a deeper cause of personal discontent with his employers, but this is only surmise. With Amedeo Lavy's departure, the Turin mint was deprived of the creations of a master, and the products of the mint plunged for decades into a discouraging mediocrity.

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[7] *CNI*, vol. 1, p. 440, coin 2.

[8] COMANDINI, *L'Italia nei cento anni*, vol. 1, p. 452.

[9] *CNI*, vol. 2, p. 415, coin 3; PAGANI, *Monete italiane*, coin 2.

[10] This coin, the first decimal coin issued in Italy, was struck in accordance with the decree of March 13, 1801 (22 Ventoso, year 9). It commemorated the victory of Napoleon Bonaparte against the Austrians under General Melas at Spinetta in the vicinity of Marengo (near Alessandria). See also CARBONERI, *Monete e biglietti*, pp. 91–95; BOSCO, *RIN* (1919), p. 113.

[11] For this first silver decimal coin, see: CARBONERI, pp. 92–95; *CNI*, vol. 2, p. 415, coin 4; PAGANI, *Monete italiane*, coin 4; DAVENPORT, *European Crowns*, coin 197.

[12] *CNI*, vol. 1, p. 448, coin 65; PAGANI, *Monete italiane*, coin 379; SPAZIANI-TESTA, *Casa Savoia*, coin 112; DAVENPORT, *European Crowns*, coin 135; CARBONERI, p. 263.

Lavy's successor at the Turin mint was Giuseppe Ferraris, but we will discuss his work later, since his activity developed chiefly after 1861, during the reign of Victor Emmanuel II.

MILAN, VENICE, AND GENOA

The first half of the 19th century was a stormy period for both Milan and Venice, already united by a common destiny. Governed by an Austrian archduke, each city was part of the Austrian Empire. Later, during Napoleon's regime, they exchanged Austrian domination for rule by the French. Then in 1815 the Congress of Vienna restored to Austria the Lombardo-Venetian Kingdom from the debris of Napoleon's Italian possessions. Almost fifty years would pass before Lombardy and then Venice would join the other Italian provinces in forming the Kingdom of Italy. During the long Austrian and the French regimes, however, the mints of Milan and Venice continued to function. Artists like Luigi Manfredini, Guiseppe Salvirch, and Gerolamo Vassallo worked in these tormented years, celebrating the glory of the Austrians as well as of the French. Despite foreign domination, the coinage these artists created often reflects the eternal aspirations for freedom which they shared with other nationalistic Italians. The group of coins produced during the days of the ephemeral national republics of the period 1797–1805 in Turin, Milan, Genoa, or Venice form their most outstanding creations.

Luigi Manfredini [13] (1771–1840) was hired in his early youth by the Milan mint, where he worked for over thirty years, 1798–1830. He became a well-known sculptor and cast-iron worker and was entrusted with the casting of the Victory quadriga which ornaments the Arco della Pace in Milan. His activity as an engraver of medals embraced a large group of commemorative medals celebrating important events during the reigns of Napoleon and Francis.[14] Many portrait medals of famous Italians, past and contemporary, complete his long series of works.

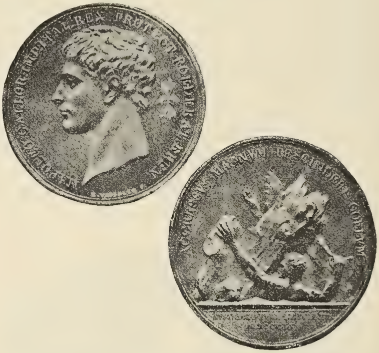

Fig. 6.—Kingdom of Italy, Napoleon I, medal ("Encelado"), 1809 [15]
(Photo from Comandini)

One medal, engraved jointly by Manfredini and Vassallo, which celebrated the victory of Napoleon at Ratisbon in 1809, was the subject of much controversy. The reverse, Manfredini's work, representing a giant crushed under an enormous rock (fig. 6), was misinterpreted by his contemporaries as a political allusion to Napoleon's absolutistic regime and was mockingly called "Encelado" (Enchained). It allegedly caused serious trouble for Manfredini.[16] He was accused also of being the author of the defamatory inscription NATOLEONE on the lira piece of 1810. Gnecchi says that contemporary investigators were unable to discover the author and that only later was it known that Manfredini was responsible for it.[17]

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[13] *BDM*, vol. 13, pp. 552–555; Thieme and Becker, vol. 24, p. 10; Bolzenthal, p. 304; Comandini, *L'Italia nei cento anni*, vol. 1, p. 344.

[14] For some of his Napoleon medals, see: Edwards, *Napoleon Medals*, pls. 7, 9, 14, 17, 18, 24, 26, 31, 32, 39; Bramsen, *Médaillier Napoléon*; Patrignani, *NumR* (1948), vol. 14, pp. 116–118.

[15] Comandini, *L'Italia nei cento anni*, vol. 1, p. 344.

In his medals, as in his coins, Manfredini gives evidence of an outstanding artistic sensitivity, and, in addition, among his contemporaries he excels through a classical simplicity of form. In his portrait of Napoleon (fig. 7) he comes close to the perfect equilibrium of concept and expression that is characteristic of ancient art. The features of Napoleon, however impassive and remote in expression, are not lifeless in their statuesque beauty. The well-modeled relief suggests far more inner life than Tiolier's famous portrait of the Emperor (fig. 8). The proportion between head and inscription also finds a much happier solution in Manfredini's coinage than it does in Tiolier's. Remarkable versatility helped Manfredini change his style according to subject. The portrait of Maria Louisa of Parma (fig. 9), classical in its simplicity and purity of form, follows a line that is suffused with feminine grace, in contrast to the rocklike massiveness of Napoleon's head.

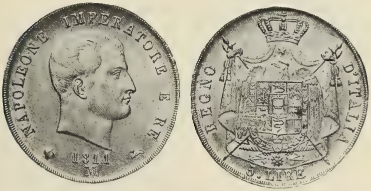
Fig. 7.—Kingdom of Italy, Napoleon I, 5 lire, 1811, Milan mint [18]
(Div. of Numismatics photo)

Following a long-standing custom, Manfredini concentrated chiefly on the main die-work, the cutting of the obverse design, which consisted of the ruler's portrait or a composition, while the more patternbound work on the coat of arms of the reverse was entrusted to another, less important artist. In fact, the Italian coinage of Napoleon was almost always the work of Manfredini in association with two other artists, either Salvirch or Vassallo.[21]

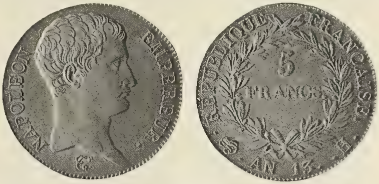
Fig. 8.—France, Napoleon I, 5 francs, year 13 [1804–1805] by Tiolier [19]
(Div. of Numismatics photo)

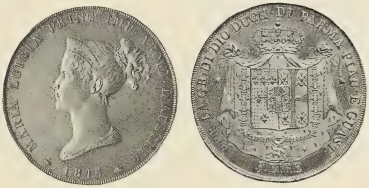
Fig. 9.—Parma, Maria Louisa, 5 lire, 1815 [20]
(Div. of Numismatics photo)

Giuseppe Salvirch [22] (originally Franz Joseph Salwirk or Sallwuerk) was born in Mollenberg near Lindau, in Wurttemberg, in 1762. At the age of seventeen he came to Milan, where he started working at the mint as an apprentice of his uncle Christoph Wocher, chief engraver. Within a few years he succeeded in establishing his position at the mint:

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[16] Comandini (op. cit., p. 427) indicates that he was forced to leave Italy and that he returned only in 1814 with the Austrians.

[17] F. and E. Gnecchi, *Le monete di Milano*, p. 216. See also: Carboneri, p. 117; Patrignani, *RasN* (1931), vol. 28, pp. 11–21; *NumR* (1948), vol. 14, p. 57; *NumR* (1949), vol. 15, pp. 107–108.

[18] *CNI*, vol. 5, p. 428, coin 82; Pagani, *Monete italiane*, coin 98; Davenport, *European Crowns*, coin 202.

[19] Davenport, *European Crowns*, coin 83.

[20] *CNI*, vol. 9, p. 553, coin 4; Pagani, *Monete italiane*, coin 278; Davenport, *European Crowns*, coin 204; Carboneri, pp. 247–249, 251n.

[21] Pagani, *Monete italiane*, coins 75–219.

[22] *BDM*, vol. 5, pp. 320–321, and vol. 8, p. 186; Thieme and Becker, vol. 29, p. 369; Bolzenthal, p. 304.

in 1789 he was nominated third engraver; in 1801, first engraver; and in 1803, chief engraver. During these years he collaborated with Manfredini.

Most of Salvirch's works were unsigned, and only on medals may we find his initials I.S.F. (Josephus Salvirch fecit)—or SC (Salvirch Giuseppe) on the pattern of a 40-lire piece of Napoleon. The patterns for the coinage of the Italian Republic struck between 1803 and 1804 (fig. 10), though unsigned, are mainly his work.[24]

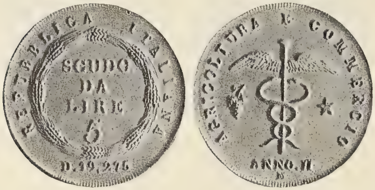

Fig. 10.—Italian Republic, pattern scudo of 5 lire, year 2 [1803] [23]
(Photo from Pagani)

An excellent feeling for ornamentation, for those little details which fill the field in counterbalance to the surrounding inscription, distinguishes his work. Harmoniously designed, these patterns sometimes show, especially in the medium-sized coins, a distinct tendency to oppose compactly filled obverses with sparsely inscribed reverses.

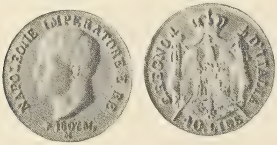

Fig. 11.—Kingdom of Italy, Napoleon I, pattern 40 lire, 1807 [25]
(Photo from Pagani)

From 1806 and 1807 date his patterns for the reverse of Napoleon's gold coinage of 40 and 20 lire (fig. 11). The massive coat of arms, with the shields of the many subjugated Italian principalities as center design and the surrounding inscription looking like a forgotten detail pressed in later, is too cumbrous for the limited field of the coin. Nevertheless, the project won Napoleon's approval and for eight years this reverse, joined to Manfredini's obverse, was the emblem of the French Emperor's Italian coinage.

In his earlier years Salvirch used a more balanced arrangement in his compositions. A good example is the scudo of 6 lire of 1800 engraved for the ephemeral Cisalpine Republic (fig. 12). The allegorical group of the obverse excels not only in its medal-like treatment of the relief but in the classical arrangement of the two figures. The seated figure of France is counterbalanced harmoniously by the standing figure of the Cisalpine Republic while the surrounding field is encircled by an unobtrusive but compact inscription.

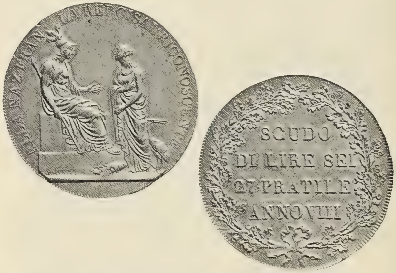

Fig. 12.—Cisalpine Republic, scudo, year 8 [1800] [26]
(Div. of Numismatics photo)

The reverse, however, even though impressive in its well-rounded line, already shows his growing aversion for empty space. The large letters of the inscription are narrowly enclosed within the wreath, contrasting unpleasantly with the uncluttered composition of the obverse.

In association with Salvirch worked his disciple and successor Gerolamo Vassallo.[27] Born in Genoa in

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[23] *CNI*, vol. 5, p. 416, coin 4; Pagani, *Prove e progetti*, coin 436.

[24] *CNI*, vol. 5, pp. 415–418, coins 1–28; F. and E. Gnecchi, pp. 203–206; Comandini, *L'Italia nei cento anni*, vol. 1, pp. 96–97; Carboneri, p. 116; Rinaldi, *Rivoluzione Francese*, coins 131–150; Pagani, *Prove e progetti*, coins 433–466.

[25] F. and E. Gnecchi, p. 209, coins 1–2; Rinaldi, coins 490–492; Pagani, *Prove e progetti*, coins 467–471.

[26] *CNI*, vol. 5, p. 415, coin 1; F. and E. Gnecchi, p. 222, coin 1; Rinaldi, coin 129; Davenport, *European Crowns*. coin 199.

[27] *BDM*, vol. 6, pp. 204–206; Thieme and Becker, vol. 34, p. 132; Bolzenthal, p. 304; Avignone, *Medaglie dei Liguri*.

1773, he had a very active life that kept him in the service of the Hapsburgs and of Napoleon at the mints in Genoa and Milan. Antoine Guillemard, the senior engraver of the Milanese mint, and also Salvirch advised him in the art of coin engraving. In his independent position as chief engraver at the Genoa mint, he could develop his own artistic personality, uninhibited by official directions.

The coinage of the Ligurian Republic (Genoa) between 1797 and 1805 is entirely his work.

The political changes had a repercussion in his life. In 1808 he was transferred by the French Government to the Milanese mint, where he spent the remainder of his days. His work developed chiefly as a collaboration with Manfredini and Salvirch in serving two masters, Napoleon and Francis of Austria. He engraved many medals in commemoration of their victories. The entry of Napoleon into Genoa is the subject of one of his medals in 1805,[28] while the battle at Ratisbon was commemorated on a medal of 1809, for which Manfredini engraved the reverse. Most of Vassallo's works are signed with his complete name or with his initials, H.VAS.F., H.V.F., sometimes only V.

An active spirit, Vassallo surprises us with his inventiveness in arranging purely heraldic patterns. The coinage of the Ligurian Republic shows two versions of an emblematic pattern used on the reverse of the gold and silver coinage. The composition of the obverse, on the contrary, is less inspired. Very conventional in its conception, for example, is the allegorical figure on the gold 96-lire piece (fig. 13).

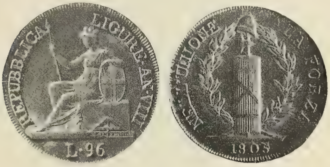

Fig. 13.—LIGURIAN REPUBLIC, 96 lire, 1805 [29]
(Div. of Numismatics photo)

A well-balanced composition, it cannot be compared, however, with the classical distinction of Manfredini's groups or with the plasticity of Salvirch's figures.

Vassallo was not skillful in adapting the plastic relief of figures to the flat surface of a coin, and the more linear treatment of his engravings proved inadequate to the wear of circulation. Very often we find Ligurian gold 96- or 48-lire pieces with a shadowy figure in the center, reduced to an unclear silhouette, whereas the surrounding inscription shows little wear.

Of unquestionable value instead is the allegorical group represented on the obverse of the silver 8-lire piece of 1804 (fig. 14). Conceived in the spirit of the time, this neoclassical theme, with its respresentation of Liberty and Equality clad in Roman garments, betrays a strong influence of Lavy and Salvirch. Despite this, Vassallo must be credited with a masterful execution; the well-rounded relief and the harmonious arrangement of the composition contribute a representative coin-image of the interval between Directoire and Empire.

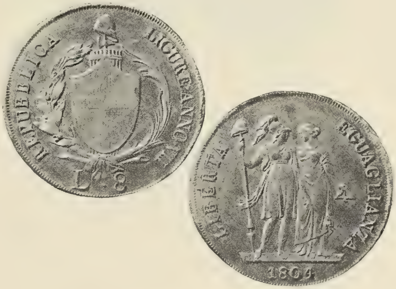

Fig. 14.—LIGURIAN REPUBLIC, 8 lire, 1804 [30]
(Div. of Numismatics photo)

The simplicity of ancient Roman ideals found expression not only in his conception and arrangement of a composition but also in his interpretation of a portrait. The head, bared of any external adornments, became the subject of intensive study, which resulted in the expression of truly human characteristics. Napoleon's dominating personality had found a timeless image in Lavy's and Manfredini's portraits, and Vassallo tried to follow their example.

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[28] COMANDINI, *L'Italia nei cento anni*, vol. 1, p. 144.

[29] *CNI*, vol. 3, p. 506, coin 2; DESIMONI, *Atti della Società Ligure di Storie Patria* (1890), vol. 22, pp. 248–249; CARBONERI, p. 100.

[30] *CNI*, vol. 3, p. 505, coin 7; RINALDI, coin 86; DAVENPORT, *European Crowns*, coin 198.

His interpretation of Napoleon's head on the new coinage of the copper soldo (fig. 15) and the 3 centesimi of 1811 strongly betrays the influence of Lavy. In portraying the head of the Emperor in 1811 Vassallo closely followed the youthful portrait of the First Consul engraved almost eight years before by Lavy (fig. 16).

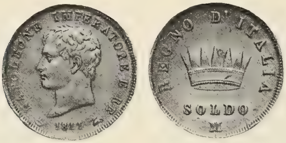

Fig. 15.—Kingdom of Italy, Napoleon I, soldo, 1811, Milan mint[31]
(Div. of Numismatics photo)

Vassallo's active and vivid personality continually shaped his style with the passing of time, and in later years he is amazing in his audacity of composition, wherein the emphasis is placed upon the plasticity of the relief, so much neglected in his earlier work. A pattern 100-franc piece of 1807 (fig. 17) shows Napoleon's head facing partly to the right. This three-quarter profile, a challenge to every artist as far back as the master engravers of ancient Greece, found a happy solution in this pattern. Ineffective for any actual coinage, where daily wear in a short time would deface the unprotected high points of the features, this pattern, nevertheless, is an interesting experiment in modern coin engraving.

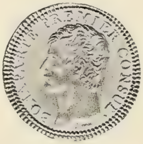

Fig. 16.—French Republic, Napoleon First Consul, obverse of pattern, 40 francs, year XI [1803][32]
(Div. of Numismatics photo)

But Vassallo's real test lay in another coin pattern, this time in the name of Napoleon's opponent, Francis I of Austria. The pattern for the 6-lire piece, 1816, for Lombardy and Venice (fig. 18) is positive

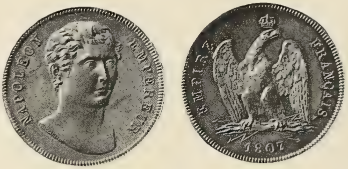

Fig. 17.—Genoa as part of the French Empire, Napoleon I, pattern 100 francs, 1807[33]
(Photo courtesy American Numismatic Society)

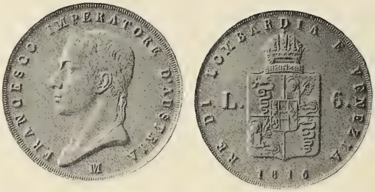

Fig. 18.—Lombardy-Venice under Austria, Francis I 6 lire, 1816, Milan mint[34]
(Author's photo)

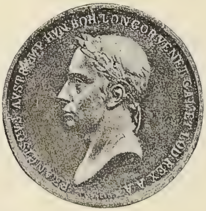

Fig. 19.—Lombardy-Venice under Austria, Francis I, obverse of prize medal, 1815[35]
(Photo from Comandini)

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[31] *CNI*, vol. 5, p. 428, coin 88; Pagani, *Monete italiane*, coin 180; Comandini, *L'Italia nei cento anni*, vol. 1, p. 605; Carboneri, p. 118.

[32] Pagani, *Prove e progetti*, coin 419.

[33] *CNI*, vol. 3, p. 506, coin 1; Pagani, *Prove e progetti*, coin 424; Rinaldi, coin 110.

[34] *CNI*, vol. 5, p. 432, coin 3; Pagani, *Prove e progetti*, coin 509; F. and E. Gnecchi, pl. 50, coin 1; Carboneri, p. 167; Comandini, *L'Italia nei cento anni*, vol. 1, p. 918. Forrer (*BDM*, vol. 3, p. 553) assigns this pattern to Manfredini and in another place (*BDM*, vol. 6, p. 205) to Vassallo.

[35] Comandini, *L'Italia nei cento anni*, vol. 1, p. 827.

evidence of his artistic capabilities as an engraver. As late as 1815, Vassallo had engraved a similar portrait of Emperor Francis I on a prize medal celebrating industries and manufactures (fig. 19), but in the coin the expressive features of the sovereign, chiseled by a master's hand in a very low relief, are perfectly set in the field of the coin, while the same exquisite proportion dominates the arrangement of the reverse.

It is tragic that Vassallo put a premature end to such varied and prodigious activity. Financial worries and ill health drove him to commit suicide in March 1819.

FLORENCE

No other Italian state reflected the turbulent events of the eighteen hundreds as much as Florence, stronghold of Italian culture. After 1737, when its national dukes ceased to come from the Medici family, Tuscany had a rapid change of rulers. The subsequent domination by the Austrian Hapsburgs was overthrown by the new spirit of liberty flowing from France. But the free and restless years of 1799 and 1800 led only to another foreign domination. Backed by Napoleon, the newly created Kingdom of Etruria was ruled by the Spanish Bourbons until 1807, when Napoleon's sister Elisa Bacciocchi took over and gave Tuscany and Lucca a peaceful but short rule. The downfall of the Napoleonides brought the Hapsburgs back to the throne of Florence, and only the growing tides of the national liberation movement finally freed Tuscany, which in 1860 became part of the United Kingdom of Italy.

The political vicissitudes of these momentous decades found only a pale reflection in Tuscany's coinage. The series of silver francesconis or gold rusponis show little if any change in the basic design during the various reigns. The crowned shield of Tuscany is invariably the one reverse type used, and only the small inserted escutcheons with the arms of the Lorraine-Hapsburgs or of the Bourbons unobtrusively indicate the passing of rulers and dynasties.

The influence of Vienna as well as Paris alternately played a leading part in the development of the engraving art of Florence. But no outstanding artistic personality distinguished himself during the period between 1800 and 1860 and no artistic school or tradition took shape at the Florentine mint. In brief, the art of coin engraving had an even flow, undisturbed by daring, new ideas. The only challenge offered to the artists was in portraits. Here they could show the quality of their work.

The names of the various coin engravers denote the varied influences: the Austrian Zanobio Weber, the French Louis Siries, the Swiss Giuseppe Niderost, the Tyrolian Luigi Pichler—more actually than the Italian influence of Antonio Fabris, Pietro Cinganelli, and Luigi Gori.

Giovanni Zanobio Weber [36] (1761–1805), son of an Austrian officer in the Corps of the Guards and pupil of the Viennese engraver Anton Franz v. Widemann, worked chiefly during the late seventeen hundreds.[37] Only the die of an early gold ruspone (1803–1807) and a zecchino ("Zecchino Zanobino") that was ordered by the Jewish banker Lampronti for the Levantine trade are attributed to Weber.[38] The artistic execution of both coins, using old established types, shows no personal character.

More renowned was the Siries dynasty of French engravers, who included among the members of their family a famous woman painter, Violante Beatrice (1709–1783), and her father, Louis Siries [39] (d. 1754), the well-known engraver of gems at the court of Louis XV of France. The prestige of French engraving assured Louis Siries the support of Grand Duke Francis II of Tuscany, who appointed him director of the Grand Ducal Gallery in 1749 and engraver at the mint in this same period.

Luigi Siries (1743–1811), his grandson, whose work was often mistaken for that of the older man, had developed a prodigious output by the time of his death. As engraver at the mint he cut the dies for the coinages of the Grand Dukes Peter Leopold and Ferdinand III, and for King Louis I and his son

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[36] *BDM*, vol. 6, pp. 403–404; Thieme and Becker, vol. 35, p. 219.

[37] Bolzenthal (p. 245) characterizes as remarkable his portrait of Vincenzo Bellini.

[38] *CNI*, vol. 12, pp. 459–460, coins 33–34; Rinaldi, p. 103 coins 745–746.

[39] Thieme and Becker (vol. 31, p. 102) and *BDM* (vol. 5, pp. 535–540) include information on the entire Siries family.

Charles Louis. He also designed the portraits of Elisa and Felix Bacciocchi of Lucca although the dies for the actual coinage were cut by Domenico Bentelli. Most of Luigi's works are signed with L.S.F., S.F., or S & L in monogram, and some are unsigned. (The dies signed only with an S are attributed to Carlo Siries, his son.)

The coin dies in the first part of Luigi's activity show little artistic quality although they mark a positive progress in comparison with his grandfather's work. The esthetic effect of his early engravings is achieved by an intricate arrangement of hair locks and draperies, while the artistic finesse of portraiture is completely neglected.[40] In later years the depth of the relief gained considerably, and the simplicity of design and inscription added other salient qualities to his work. The francescone of Louis I (fig. 20) can be considered one of his better creations although the portrait remains barren of any spiritual expression.

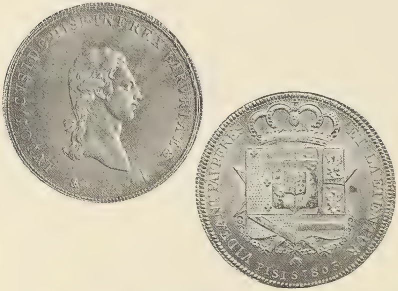

Fig. 20.—TUSCANY, LOUIS I AS KING OF ETRURIA, francescone, 1803 [41] (Div. of Numismatics photo)

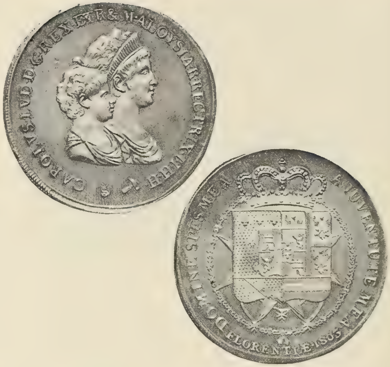

Fig. 21.—TUSCANY, CHARLES LOUIS AND MARIE LOUISE, dena or 10 lire, 1803 [42] (Div. of Numismatics photo)

The succeeding coinage of Charles Louis and his mother Maria Louise is evidence that in later years Siries' talent did not improve. The apparently attractive 10-lire piece or dena of the Regent and her son (fig. 21) shows, on closer study, only modest qualities of portraiture. Although the balance between the figures and the surrounding inscription is much better resolved than it is on the overcrowded francescone of 1806 with its separated busts (fig. 22), the portraits

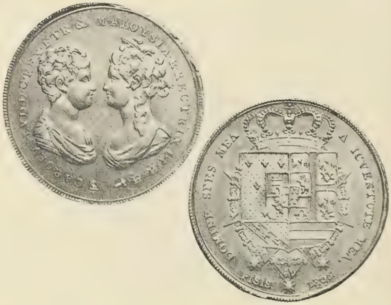

Fig. 22.—TUSCANY, CHARLES LOUIS AND MARIE LOUISE, francescone, 1806 [43] (Div. of Numismatics photo)

are cut on the same pattern. No individual expression distinguishes one head from another. The same stereotyped treatment of individual traits is obvious in Siries' dies for the 5 franchi of Elisa Bacciocchi of Lucca and her husband (fig. 23). Here the faces could be easily interchanged without altering the general impression.[45]

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[40] See *CNI*, vol. 12, pls. 30, 31, and DAVENPORT, *European Crowns*, coin 156.

[41] *CNI*, vol. 12, p. 454, coin 12var.; GALEOTTI, *Le monete di Toscana*, p. 436, coin 5; DAVENPORT, *European Crowns*, coin 151.

[42] *CNI*, p. 455, coin 2; GALEOTTI, pp. 441, 447, coin 1; DAVENPORT, *European Crowns*, coin 152.

[43] *CNI*, vol. 12, p. 458, coin 22; GALEOTTI, p. 447, coin 5; DAVENPORT, *European Crowns*, coin 155.

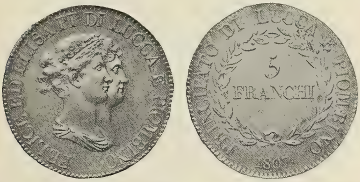

Fig. 23.—Lucca, Elisa Bonaparte and Felix Bacciocchi, 5 franchi, 1807 [44]
(Div. of Numismatics photo)

The work of Carlo Siries [46] (d. 1854) is so interrelated with his father's activity that it is somewhat difficult to keep them apart. Only after Luigi's death can we determine Carlo's dies with certainty. Most of these dies were cut for coins bearing only a heraldic type, such as the ruspone, zecchino, or soldo. In the portrait coinage of the restored Grand Duke Ferdinand III, even if Carlo did follow the paternal tradition very closely in the same neat arrangement of figure and legend within the coin field, his execution of details denotes higher artistic qualities. The portrait of the aging monarch (fig. 24) reflects great sensitivity and depth of expression in a perfectly modeled relief.

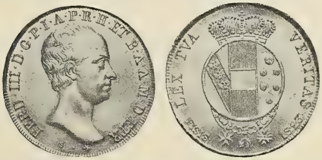

Fig. 24.—Tuscany, Ferdinand III, half francescone, 1823 [47]
(Div. of Numismatics photo)

This exquisite image finds a rival only in the die of an almost unknown artist, Pietro Cinganelli,[48] who signed with P.C. the portrait of Grand Duke Leopold II on the latter's coinage of 1826–1828 (fig. 25).

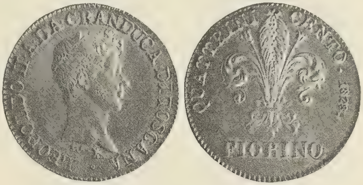

Fig. 25.—Tuscany, Leopold II, fiorino, 1828 [49]
(2x actual size)
(Div. of Numismatics photo)

The only other quoted work of Cinganelli is a medal commemorating Galileo Galilei; his coin dies have been completely ignored. Nevertheless, with the energetic features of his Leopold II, he created one of the most brilliant portrait coins in the entire Tuscany series.

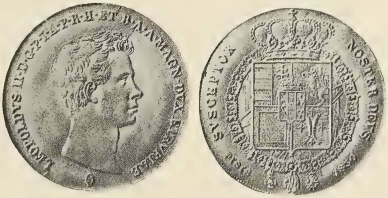

Fig. 26.—Tuscany, Leopold II, francescone, 1830 [50]
(Photo from *CNI*)

Antonio Fabris,[51] who in his early years came from Udine to Florence as a goldsmith, worked for the mint from about 1830. His portrait coin, the 1830 francescone of Leopold II (fig. 26) is not devoid of a certain robust expressiveness even if the relief modeling is very inferior. The work on a series of medals[52] during subsequent years gave him a better understanding of relief and design. Certainly his dies for the gold and silver coinage (fig. 27) of the Venetian Republic (1848–1849) display a more subtle sense of decorative arrangement in addition to a delicate plasticity of relief. The old symbol of Venice, the Lion of St. Mark,[54] used in a new style, dominates the field of the obverse, while a slightly oval wreath adds grace to the reverse of the coin.

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[44] *CNI*, vol. 11, p. 200, coin 10; Pagani, *Monete italiane*, coin 232; Davenport, *European Crowns*, coin 203.

[45] For the decree concerning this issue, see Carboneri, pp. 132–133.

[46] *BDM*, vol. 5, p. 535; Thieme and Becker, vol. 31, p. 102.

[47] *CNI*, vol. 12, p. 464, coin 27; Galeotti, p. 467.

[48] *BDM*, vol. 1, p. 434, and vol. 7, p. 182; Bolzenthal, p. 307.

[49] *CNI*, vol. 12, p. 468, coin 22; Galeotti, p. 479, coin 3.

[50] *CNI*, vol. 12, p. 469, coin 31; Galeotti, p. 477; Davenport, *European Crowns*, coin 158.

[51] *BDM*, vol. 2, pp. 64–65, and vol. 7, p. 286; Thieme and Becker, vol. 11, p. 168; Bolzenthal, p. 306; Galeotti, p. 474.

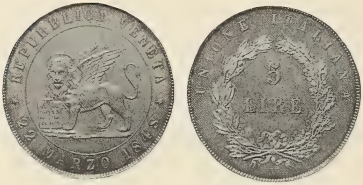

Fig. 27.—Venice, Provisional Government, 5 lire, 1848[53] (Div. of Numismatics photo)

Another engraver, Luigi Pichler[55] (1773–1854) was better known as a gem engraver and as a painter. His talents as a cutter of precious stones gave him renown as a master of this art and his work was highly appreciated at the Austrian court. Elected an honorary member of the Viennese Academy of Fine Arts, he was later invited by Count Metternich to teach engraving at the institution. He spent several years in Vienna where in 1821 he was given the opportunity to make a portrait of Emperor Francis I. Inspiration from classic antiquity often guided him in the choice of subjects for his numerous gems.

He was also well known for a large number of fine portrait medals, but as a coin engraver he produced very few dies. The francescone of Leopold II (fig. 28) presents a well-proportioned coin design with an impressive portrait. The clean line and the extreme delicacy of execution, characteristic of a gem engraver who is accustomed to minuteness of detail, results in an excellent portrait of the Grand Duke, the fragility of which contrasts obviously with the robustness of previous portraits of the same ruler by Cinganelli and especially Fabris.

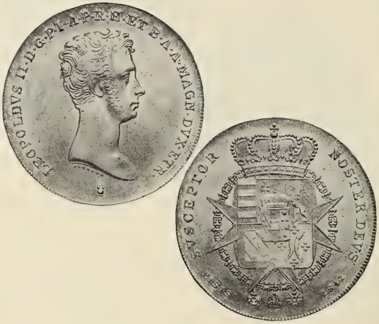
LEOPOLDVS II. D. G. P. I. A. P. R. H. ET B. A. A. MAGN. DVX. ETR.
SVSCEPTOR NOSTER DEVS

Fig. 28.—Tuscany, Leopold II, francescone, 1841[56] (Div. of Numismatics photo)

More devoted to coin engraving than Pichler was Giuseppe Niderost[57] (1804–1856), descendent of an old family of engravers from Brunnen, Switzerland. He came to Italy to learn die engraving and within a short while was working at the mint in Pisa and later at the one in Florence, where he became chief engraver in 1836. Assisted by Edoardo Gori in 1837 and later by Pasquale Santini, Niderost developed a large output at the mint, and many dies for the gold and silver coinage of Leopold II were produced by him or under his direction. Contemporaries considered his art inferior to Carlo Siries', but this opinion was based on the circumstance that most of his dies were made for coins of a purely heraldic type; executed in the traditional way with few if any changes, they gave him little opportunity to demonstrate skill. A neat workmanship was about all that was expected from an artist. Nevertheless, Niderost adapted the old Florentine lily and the crowned shield of arms to a new coin denomination, the 80 fiorini in gold (fig. 29), and the result is one of Italy's most striking gold coins of the period.

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[52] Mondini (*Spigolando tra medaglie*, p. 23) published a medal (1848) of Daniele Manin by A. Fabris.

[53] *CNI*, vol. 8, p. 661, coin 2; Pagani, *Monete italiane*, coin 299; Davenport, *European Crowns*, coin 207; Carboneri, pp. 173–174.

[54] See also Papadopoli, *Alcune notizie sugli intagliatori.*

[55] *BDM*, vol. 4, pp. 522–530, and vol. 8, p. 127; Rollett, *Die drei Meister der Gemmoglyptik;* Bolzenthal, p. 318; Galeotti, p. 474.

[56] *CNI*, vol. 12, p. 473, coin 71; Galeotti, p. 478, coin 6; Davenport, *European Crowns*, coin 159.

[57] *BDM*, vol. 4, p. 263, and vol. 8, p. 96; Thieme and Becker, vol. 25, p. 459; Galeotti, p. 474.

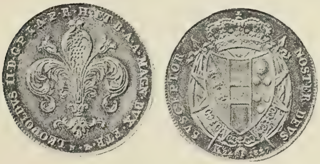

Fig. 29.—TUSCANY, LEOPOLD II, 80 fiorini, 1827 [58] (Div. of Numismatics photo)

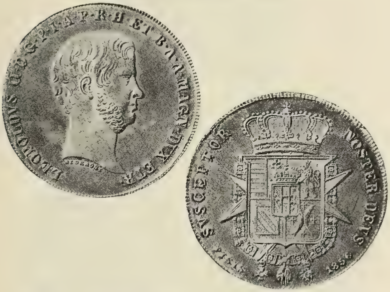

Fig. 30.—TUSCANY, LEOPOLD II, francescone, 1856 [59] (Photo courtesy American Numismatic Society)

The coin which best shows his art, however, is the francescone of 1856 (fig. 30). Here he created a new portrait of Leopold II [60] which presents a completely different aspect of the aging Grand Duke. The features are full of life and expression in a relatively low but excellently modeled relief.

From the hand of Luigi Gori [61] (b.1838 in Florence), the last engraver at the Florentine mint in the late fifties, we have another coin portrait of the old monarch (fig. 31). A good style, leaning slightly toward conventionalism, distinguishes these final productions of Tuscany's engraving art. Gori's workmanship is good, his elaborate style enhances an acute sense of realism, and his fine modeling adds depth to the low but effective relief. His dies for the gold so-called "ruspone del Ricasoli" and the other coins struck by the Provisional Government in 1859 are the last coins of independent Tuscany.

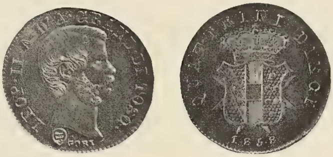

Fig. 31.—TUSCANY, LEOPOLD II, 10 quattrini, 1858 [62] (Div. of Numismatics photo)

PARMA

Parma, for 32 years under the rule of Maria Louisa of Austria, second wife of Napoleon, was returned in 1847 to the former Dukes of Bourbon-Parma, but the remaining 13 years of this Duchy's independence were agitated by political disturbances and insurrections. The tides of the Revolution of 1848 were strongly felt in Parma; the reigning Duke Charles II had to abdicate in favor of his son Charles III, who was assassinated in 1854. Charles' infant son Robert ascended the throne under the regency of his mother, but six years later Parma was absorbed into the united Italian Kingdom.

The little principality had an old tradition in coin engraving. The silver scudi and the gold quadruplas of the Farnese princes are judged to be among Italy's most remarkable coin products during the 16th and 17th centuries.

After 1800 very few coins were struck for Parma, but some should be singled out for their charm and technical perfection. The portrait of Maria Louisa on the silver and gold coinage by Manfredini (fig. 9) was considered by contemporaries as one of the most graceful coin images of the time.

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[58] *CNI*, vol. 12, p. 467, coin 13; GALEOTTI, p. 475, coin 1. For the law concerning this issue, see CARBONERI, p. 201.

[59] *CNI*, vol. 12, p. 476, coin 106; GALEOTTI, p. 478, coin 3; DAVENPORT, *European Crowns*, coin 160.

[60] A similar portrait of Leopold II can be seen on a medal engraved by Niderost in 1849—cf. MONDINI, p. 79.

[61] *BDM*, vol. 2, pp. 295–298, and vol. 7, p. 377; THIEME and BECKER, vol. 14, p. 401; GALEOTTI, pp. 474, 494.

[62] *CNI*, vol. 12, p. 477, coin 119; GALEOTTI, p. 484.

With this coin is associated the name of Giovanni Antonio Santarelli[63] (1759–1826), an excellent gem cutter and die sinker, who reportedly engraved the dies for the coin from designs by Manfredini. Inspired by the same portrait of Maria Louisa, he also cut a medal of the Duchess commemorating her arrival in Parma (1816).[64] In addition, he engraved the coinage of Eliza and Felix Bacciocchi of Lucca, designed by Luigi Siries (fig. 23), and two medals dedicated to the same princely couple.[65]

After Santarelli moved to Florence, he was succeeded at the mint by Domenico (Donnino) Bentelli.[66] Born in Piacenza in 1807, Bentelli moved in 1844 to Parma, where he worked as engraver at the mint and later as professor of engraving at the Academy of Fine Arts. He died in 1885 at the age of 78. His art studies as well as his training as mechanical engineer[67] enabled him to participate effectively in the reorganization of the Parma mint in 1853. His work discloses a neat but somewhat mediocre concept of art. An impressive number of official and private medals[68] came from his workshop. In 1852 Bentelli prepared the dies for the coinage of Charles III of Bourbon, but the Duke's assassination in 1854 made the issuance of the coins impossible. Dies were cut only for the 5 centesimi 1852 and the 1, 3, and 5 centesimi 1854 in copper.[69] Bentelli also prepared drawings for a group of six coin projects, which included the 10 and 20 centesimi, and the ½-, 1-, 5-, and 20-lire pieces.[70]

These coin projects betray a strong influence on Santarelli by the English mint masters, especially William Wyon. The arrangement of the escutcheons on the reverse of the 20-centesimi piece (fig. 32) is practically an adaptation of a similar arrangement in use in England since the days of Queen Anne. St. George killing the dragon on the 20-lire gold piece (fig. 33) can be regarded only as a clumsy copy of the famous Pistrucci model for the coinage of George III of England.

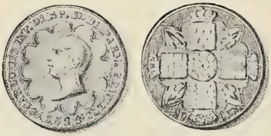

Fig. 32.—Parma, Charles III, project for 20 centesimi, 1852[71]
(Photo from *BDM*)

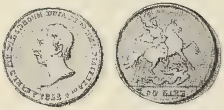

Fig. 33.—Parma, Charles III, project for 20 lire, 1852[72]
(Photo from *BDM*)

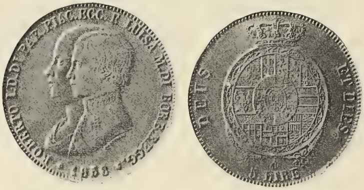

Fig. 34.—Parma, Robert and Marie Louise, 5 lire, 1858[73]
(Photo from *CNI*)

Far superior in concept and especially in workmanship is the silver 5-lire piece (fig. 34) struck in 1858 for the young Duke Robert and his regent mother, Maria Louisa. The graceful but otherwise insignificant portraits of the two rulers is coupled with an exquisite reverse, in which skill in harmoniously balancing composition and detail adds charm and brilliance. With this coin (considered in fact a pattern because only 470 specimens were struck), the century-long series of Parma coinages came to an end.

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[63] *BDM*, vol. 5, p. 334, and vol. 8, p. 187; Thieme and Becker, vol. 29, p. 428.

[64] Comandini, *L'Italia nei cento anni*, vol. 1, p. 892.

[65] Ibid., pp. 143, 342.

[66] *BDM*, vol. 1, p. 164, and vol. 7, pp. 67–70; Thieme and Becker, vol. 3, p. 353; Juillerat du Rosay, *NCirc* (1915), pp. 669–672.

[67] Some of his inventions, e.g., a new safety catch for guns, found practical application; he also invented special coin scales and a device for detecting counterfeit coins.

[68] In 1872 he also engraved a Verdi medal, which was issued by the Municipality of Parma to commemorate the success of the opera *Aida*—Nataletti and Pagani, *Le medaglie di Giuseppe Verdi*, p. 9.

[69] *CNI*, vol. 9, p. 556, coins 1–4; Pagani, *Prove e progetti*, coin 552; Carboneri, p. 252.

[70] *BDM*, vol. 7, p. 69. Published previously by Juillerat du Rosay, *NCirc* (1915), cols. 669–672.

[71] Loc. cit.

[72] Loc. cit.

[73] *CNI*, vol. 9, p. 557, coin 2; Pagani, *Monete italiane*, coin 292; Davenport, *European Crowns*, coin 205; Carboneri, pp. 250–251.

PAPAL ROME

At the opening of the 19th century, the papacy, symbol of an age-old tradition of spiritual power, was conservatively defending the legacy of political autocracy against a constantly growing tide of liberalism and nationalism. The principles of the French Revolution, combined with the imperialistic tendencies of Napoleon Bonaparte, inflicted the first blow to the prestige of the papacy. Pope Pius VII, as a captive among the splendors of the French court at Fontainbleau, lost all freedom and retained only his dignity. After Napoleon's downfall, however, the papacy emerged once more victorious.

The new ideals of liberty propagated by the French, which initiated in Italy an era of political liberalism and nationalistic tendencies, found strong opposition in the head of the Roman Church. Pius IX fought for the perpetuation of an absolutist regime of both spiritual and political power instead of guiding the movement of unity which was inspiring all Italians. A bitter example of political anachronism, he proclaimed himself a captive within the walls of his own palace in order to symbolize his antagonism when Rome was made the capital in 1870 of the recently proclaimed Kingdom of Italy.

In the art of coinage, papal Rome has had an unrivaled tradition. A number of engraving masterworks have emerged from the workshops of artists like Benvenuto Cellini, Gasparo Molo, and the Hamerani "dynasty," embellishing the coins and medals of popes since the early fifteen hundreds. Christian devotion (mixed with memories of imperial world supremacy) inspired a magnificent series of portraits of the pontiffs as spiritual and worldly leaders. In its coinage Rome has given an astonishing example of an art in steady, organic evolution over hundreds of years of unbroken tradition.

From this tradition the work of the die engravers of the 19th century emerges as an almost compact group, only slightly colored by personal qualities of the various artists. This is especially true for the first part of the century when artists like Gioacchino Hamerani, Tommaso Mercandetti, the Cerbara brothers, the Pasinati brothers, and Bonfiglio Zaccagnini worked for the papal mint. With Carl Voigt, however, in the second half of the century, a new concept came to light and cleared the way for the vigorous artists of the 20th century.

The history of Roman glyptics and die engraving would be incomplete without the names of Giuseppe Girometti [74] (1779–1851) and his son Pietro [75] (1812–1859), both famous engravers of medals and gems. Giuseppe, already well known for four pieces of sculpture in the cathedral at Foligno, was forced by financial difficulties to concentrate chiefly on the cutting of cameos, a remunerative work which soon brought him worldwide repute. Guided by Canova's neoclassicism and by the unfailing models of the ancient Greeks, his works displayed artistic sensitivity and technical perfection.

In 1822, on the recommendation of Canova, he was hired at the Roman mint, where he worked under five pontiffs. During his long activity there he concentrated largely on medals. His portrait medals of Michelangelo, Benvenuto Cellini, Antonio Canova, and Cardinal Consalvi are judged to be among his best works. Bolzenthal in *Skizzen zur Kunstgeschichte* considered his medal of Giovanni Battista Nicolini as one of the perfect works of that time. Other creations of Guiseppe Girometti include a portrait cameo of George Washington.[76] So widespread was Girometti's fame that foreign rulers such as the tsar of Russia and the kings of England and Sardinia sought his services.

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[74] *BDM*, vol. 2, pp. 273–274, and vol. 7, p. 376; THIEME and BECKER, vol. 14, p. 189; BOLZENTHAL, p. 305; MARTINORI, *Annali della zecca di Roma*, fascs. 23–24, p. 22n.

For his medals, see: MAZIO, *Medaglie pontificie;* also *Descriptive Catalog of Papal Medals;* CAMOZZI and VERTOVA, *Medagliere del Risorgimento;* BIANCHI, *Le medaglie del terzo Risorgimento.*

For his activity as a gem engraver, see: KING, *Handbook of Engraved Gems;* E. C. F. BABELON, *La gravure en pierres fines;* DALTON, *Catalogue of Engraved Gems.*

[75] *BDM*, vol. 2, p. 274; vol. 7, p. 368; vol. 8, p. 350.

[76] MARTINORI, fascs. 23–24, p. 22n.

His medals, like his cameos, show a perfection obtained only through a mastery of form combined with deep artistic insight. His portrait of Pope Gregory XVI (fig. 35) is a good example of his ability to impart majesty to a realistic likeness of a high dignitary; the features seem to be suffused with an inner glow of spirituality.

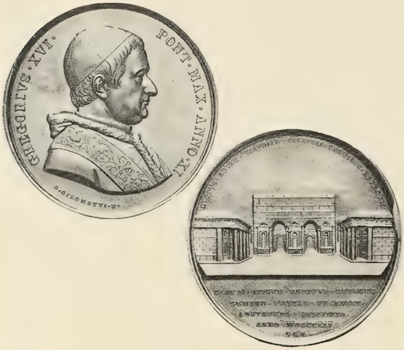

Fig. 35.—Papal Rome, Gregory XVI, medal, year XI [1842]; view of Claudian aqueduct [77] (Div. of Numismatics photo)

Pietro Girometti, who died in London in 1859 at the age of 47, was praised by Bolzenthal for the excellence of his medallic work. Pietro contributed little to coin engraving, but many fine works like the medals of Bembo and Bruneleschi are his contributions to the iconographic series of famous Italians, an enterprise undertaken by his father with Nicolo Cerbara. Umani thinks that Pietro, an excellent gem cutter, might have been better than even his father, who was credited with many of Pietro's works since both often signed only their last name.[78]

During the Pontificate of Pius VII (1800–1823), two brothers from the Hamerani dynasty of celebrated coin engravers devoted their activity to the Roman mint. Their names were linked to a glorious tradition which went back to the sixteen hundreds, when the Hermanskircher family of goldsmiths came from Bavaria to Rome to place their professional skill at the service of the popes. Among the many gifted artists in the family were two women, Anna Cecilia[79] (1642–1678), who executed some Biblical scenes for gold candelabra in St. Peter's, and Beatrice [80] (1677–1704), a talented engraver who produced during her short life many dies for seals and medals.

The two brothers Gioacchino and Giovanni added little to the renown of their ancestors [81] possibly because their choice of career was determined by a rigid family tradition and not by individual talent. Gioacchino,[82] the older brother (1761–1801), served from 1789 as engraver at the Roman mint, achieving in 1794 the title of "cameral" engraver in charge of all coin and medal dies. Forrer states that his work was "unfortunately poor," [83] while Thieme and Becker are of the opinion that Gioacchino, like his father Ferdinand, did very little work himself.[84] Many coin dies during Pius VI's and Pius VII's pontificates bear the complete signature G. HAMERANI, obviously designating in later years only the younger brother Giovanni Hamerani.

Giovanni [85] (1763–1846) studied architecture at the Academy in Parma, and in 1784 won the first award with his plan for the library. After he and his brother Gioacchino in 1796 sold the collection of the Hamerani dies to the papal administration, he decided to devote his time more to coin engraving than to architecture. Following the death of his brother, he took over the position of coin engraver at the papal mint. His activity was divided between the Roman mint and the Accademia di S. Luca, where he served after 1810 as a professor of medallic art.

The artistic capacity of the two brothers was limited to copying long-accepted coin types apparently

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[77] Patrignani, *Gregorio XVI*, medal 71.

[78] Umani, *NumR* (1943–1945), vols. 9–11, p. 62.

[79] Thieme and Becker, vol. 15, p. 548.

[80] Loc. cit.; also Keary, *British Museum Guide*, p. 87, item 343.

[81] Cf. J. Babelon, *Médaille et médailleurs*, p. 189: "Leur mérite artistique n'est pas transcendant."

[82] Thieme and Becker (vol. 15, p. 549) and Martinori (fasc. 19, p. 169; fasc. 21, p. 21) indicate that Gioacchino Hamerani died in 1797 and that it was his brother Giovanni who signed the later works with "G.H." Both Serafini and Forrer consider Gioacchino the author of all the coin dies during the first five years of Pius VII's pontificate and do not mention Giovanni at all. For the best study of the Hameranis, see Noack, *Archiv für Medaillen- und Plakettenkunde* (1921–1922), vol. 3, pp. 37–39.

[83] *BDM*, vol. 2, p. 398. Bolzenthal (p. 270) also comments: ". . . er war Medailleur des Papstes Pius VI, dessen Bildnisse er wiederholt, aber in sehr tadelhafter Manier hergestellt hat."

[84] Thieme and Becker, vol. 15, p. 549.

[85] Ibid., pp. 548–549.

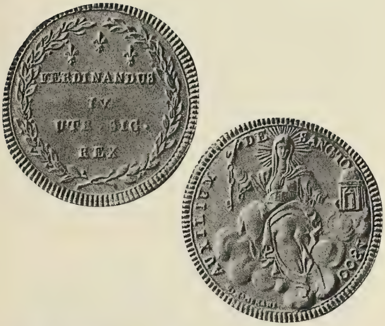

Fig. 36.—Neapolitan Occupation of Rome, Ferdinand IV, scudo, 1800 [86]
(Photo from *CNI*)

without being able to add the slightest personal interpretation. Giovanni adopted his brother's dies for the reverse of the scudo struck by Ferdinand IV of Sicily during the occupation of Rome in 1800 (fig. 36). Rudely modeled planes, guided by heavy lines, add only massiveness to the heavenly figure of the Church, depriving the figure of any spiritual beauty; heavy lettering renders the proportions even more awkward.

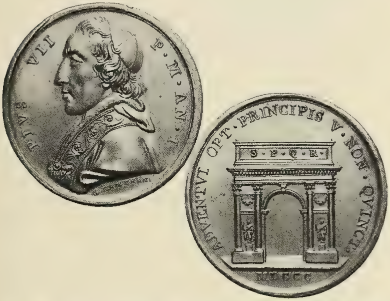

Fig. 37.—Papal Rome, Pius VII, medal commemorating his accession, year I, 1800 [87]
(Div. of Numismatics photo)

The same wooden rigidity, devoid of any trace of inner life, is the characteristic of a portrait medal of Pius VII (fig. 37). The very flat and superficial relief of the conventional features contrasts unpleasantly with the elaborate fullness of the folds in the garment. The unusually elongated face of the Pontiff disturbs the artistic balance of the composition, giving the impression that the face is just an insert within a prearranged frame.[88]

Another medal of the same Pontiff (fig. 38) by Giovanni Hamerani uses a similar arrangement of garment and "mozzetta" to frame a better proportioned portrait. The features, modeled in a low but substantial relief, reflect a more spiritual life clad in severe dignity. An adequate sculptural technique adds the necessary plastic depth.

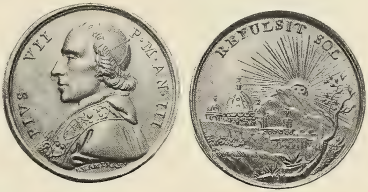

Fig. 38.—Papal Rome, Pius VII, medal, year III [1803]; St. Peter's and rising sun [89]
(Div. of Numismatics photo)

Associated with Gioacchino Hamerani at the Roman mint was Tommaso Mercandetti [90] (1758–1821), an engraver of seals, gems, and medals. The many years of his active life were a long succession of privations and betrayals. Apprenticed to gem cutting at the age of nine in the workshop of Gerolamo Rossi and later with Baldasare Curtini, he was compelled two years later to support his widowed mother and brothers. By the age of 22 he had already acquired a high reputation as a die cutter; King Ferdinand IV and Queen Carolina of Sicily entrusted him with their portrait medals and Pope Pius VI granted him a position at the Roman mint.

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[86] *CNI*, vol. 17, coin 1; Serafini, *Medagliere Vaticano*, vol. 3, pl. 158, coin 12; Martinori, fasc. 22, p. 25; Carboneri, p. 155; Spaziani-Testa, *I Romani Pontefici*, p. 142, coin 266.

[87] Patrignani, *Pio VII*, p. 46, medal 1.

[88] Patrignani (*Pio VII*, p. 49): ". . . ha riprodotto le sembianze di Papa Chiaramonti in modo non corrispondente alla verità . . . é stato ritratto con fisionomia aggraziata e molto ringiovanita."

[89] Ibid., medal 12.

[90] *BDM*, vol. 4, pp. 28–32, and vol. 8, p. 54; Thieme and Becker, vol. 24, p. 407; Bolzenthal, p. 303; Martinori, fascs. 20–21, p. 180.

A few years later, in 1796, with the support of Cardinal Braschi, he was appointed chief engraver at the mint, but he had to compromise his position constantly to the undeserved reputation of Gioacchino Hamerani, who, as a descendant of the old engraving dynasty, so monopolized honors and positions at the mint that Mercandetti was forced to acquiesce to a kind of partnership with him. Nevertheless, some of the most impressive Italian coins during these years are the result of his activity. The death of Hamerani, instead of releasing Mercandetti from a hopeless situation, plunged him into even greater troubles. Lawsuits with the Hamerani family and the ruthless competition of the brothers Giuseppe and Giovanni Pasinati as well as of the Passamonti brothers forced him to seek peace in retreat to the village of Bellmonte in Umbria.[91] There he spent many years in financial privation since political complications prevented Pope Pius VII from paying him his full salary. He returned to Rome in 1810 and continued his activity as a medalist until the end of his life in 1821.

His work includes a great number of medals [92] and coin dies engraved under Pius VI, the Roman Republic, and Pius VII. Most of his works are signed T. MERCANDETTI or only T.M., with the two letters occasionally interlaced in a monogram.

Owing, perhaps, to the strenuous conditions of his life, his coins lack a uniformity of character and execution. Deeply emotional, the quality of his work depends very much on the sincerity and intensity of his impressions. As a result, his creations alternate between mediocrity and magnificence.[93] An artistic and emotional peak of his life was reached in his collaboration with the Roman Republic. The ideals of liberty which swept from France across Rome incited a revolution against the papacy, and in 1798 the Roman Republic was proclaimed. Mercandetti participated actively in the public clamor to bring these ideals to life. The glowing hope of his generation for a betterment of past injustices is expressed in the inscription of his so-called scudo [94] of 1799 (fig. 39).

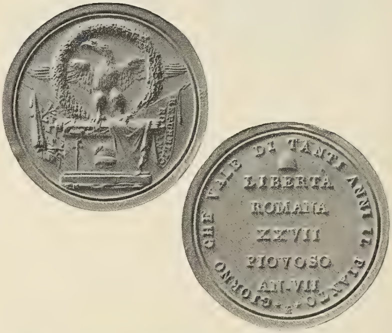

Fig. 39.—ROMAN REPUBLIC, scudo, year VII [1799] [95]
(Author's photo)

Like an exultant cry, the words "Giorno che vale di tanti anni il pianto" (a day which compensates for the weeping of so many years) appears along with the date of the French Revolutionary calendar [96] on the reverse of this piece.

The obverse is one of the most eloquent expressions in coinage of the bold spirit of revolution. The complexity of emblematic representation does not overcrowd the field but flows into a logical sequence through a masterful employment of gradation and interposition on different plastic planes. The pedestal, bearing the symbol of the ruthless fight for freedom—the dagger—plus the symbol of attained liberty—the Phrygian cap—and draped with two unfurled flags, supports a boldly advancing eagle of nationalism, enclosed in its wreath of victory, astride the fasces, symbol of authority. The dynamic eagle,[97] modeled by a master's hand in a vigorous though graceful plasticity, suggests the exuberance of triumphant ideals after a battle. An antithesis of high against flat relief accentuates the effect of logical sequence; the feathered legs of the eagle, protruding in powerful strides, convey the rhythm of advancing movement in contrast to the static background.

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[91] PATRIGNANI (*Pio VII*, p. 25) states that the other artists who could not compete with his artistic ability resorted to the deceitful expedient of deleting his signature from the medal dies. For an example, see the medal of year VI (ibid., medal 41).

[92] EDWARDS, pls. 16, 40.

[93] PATRIGNANI (*Pio VII*, p. 28), concurring with Ancona's opinion, ascribes mannerism to Mercandetti's style, especially during his last years of activity.

[94] MARTINORI (fasc. 22, p. 21) insists that this piece, generally called a scudo, was in fact a medal which was distributed to a group of young patriots clad in costumes of ancient Romans during a festivity arranged in the Forum by the Minister of Interior, Antonio Franceschi, February 15, 1799 (27 Piovoso, year VII).

[95] *CNI*, vol. 17, coin 13; SPAZIANI-TESTA, *I Romani Pontefici*, p. 140, coin 262.

[96] The 27 Piovoso (year VI), or February 15, 1798, was proclaimed by French General Louis Alexandre Berthier as the day of establishment of the independent Roman Republic.

The unusual coin image was the result of previous experiments, an example of which is the scudo of year 6 and of year 7 (fig. 40). This earlier piece, which contains the same basic, sculptural elements, but all dominated by a static conception, was transformed by the spark of inspiration into the masterpiece of figure 39.

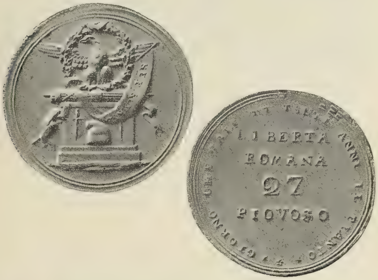

Fig. 40.—Roman Republic, scudo, year VII [1799] [98]
(Author's photo)

Another scudo (fig. 41), created earlier for the Roman Republic, clearly shows Mercandetti's sculptural abilities as well as his defects. Here he follows a more traditional pattern by using the figure of Liberty as the obverse of the coin. The reverse field encloses the inscription within an oak wreath. And again Mercandetti's acute talent for the decorative element finds happy expression. Extreme simplicity, inspired by an exquisite sense of proportion with the juxtaposition of massive and low relief, results in an unobtrusively beautiful coin emblem.

The obverse, while denoting the same harmonious balance in the arrangement of coin motif and inscription, carries an archaic figure of Liberty in the center. Although the vertical motif is emphasized through the double line of upright scepter and fasces, the figure lacks a necessary slenderness, and the massive drapery only emphasizes the robust and awkward plasticity of the image.

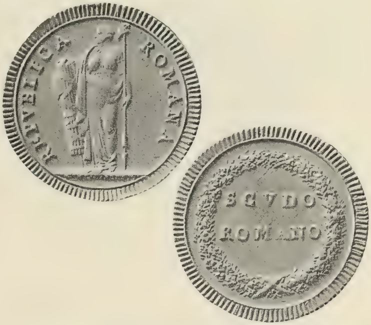

Fig. 41.—Roman Republic, scudo [no date] [99]
(Author's photo)

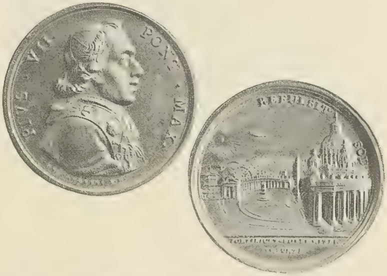

Fig. 42.—Papal Rome, Pius VII, medal [no date]; view of St. Peter's [100]
(Div. of Numismatics photo)

The same wooden rigidity of contour and plastic surface is present in a portrait medal of Pope Pius VII (fig. 42). Spontaneity and physiognomic insight seem to have completely deserted the artist in modeling the heavy, claylike features of the Pontiff. Nevertheless, Patrignani considers it "a well-executed medal." [101]

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[97] Martinori (fasc. 22, p. 31), asserts that this eagle is the copy of an ancient Roman relief found in the Forum of Trajan.

[98] Serafini, pl. 153, coin 21; *CNI*, vol. 17, coin 14; Spaziani-Testa, *I Romani Pontefici*, p. 140, coin 263.

[99] Serafini, pl. 153, coin 19; *CNI*, vol. 17, coin 28; Martinori, fasc. 22, p. 5; Spaziani-Testa, *I Romani Pontefici*, p. 141, coin 264.

[100] Patrignani, *Pio VII*, medal 4.

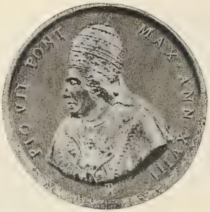

Fig. 43.—Papal Rome, Pius VII, obverse of medal, year XVIII [1818] [102]
(Photo from Patrignani)

There are better portraits of Pius VII among the 34 medals which Mercandetti executed as "cameral engraver" in later years, especially after 1807. Deserving special attention is the three-quarter bust of the aged Pontiff (fig. 43) and a profile bust of 1821 (fig. 44), both highly expressive.

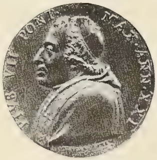

Fig. 44.—Papal Rome, Pius VII, obverse of medal, year XXI [1821] [103]
(Photo from Patrignani)

A scudo of the same Pope struck in 1816 (fig. 45) from dies cut by the chief engraver of the mint, Giuseppe Pasinati,[104] displays a portrait that is touching in its naive simplicity. Apparently an unsure feeling for plastic values and the interplay of modeled surfaces made Pasinati resort to a more linear design. Physiognomic traits are overemphasized by protuberances which add an emaciated, haggard air to the otherwise smiling features.[106] The strongly arched forehead above the deeply set eyes cannot dispel the general impression of human helplessness.[107]

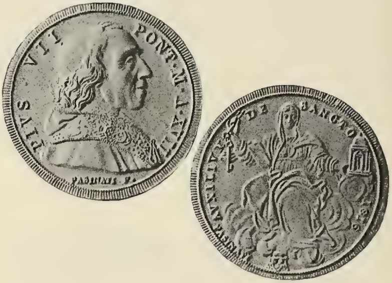

Fig. 45.—Papal Rome, Pius VII, scudo, 1816 [105]
(Photo from *CNI*)

It was a strange fate that deprived Pope Pius VII of engravers with the artistic capacity to perceive and translate into sculptural form the magnitude of his extraordinary personality.[108] Chateaubriand in his *Mémoires d'outre-tombe* describes the Pope as "*une figure admirable, pâle, triste, religieux, toutes les tribulations de l'Église sont sur son front.*"

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[101] Ibid., p. 52.

[102] Ibid., medal 84.

[103] Ibid., medal 100.

[104] *BDM*, vol. 4, p. 395; Thieme and Becker, vol. 26, p. 269; Bolzenthal, p. 307; Carboneri, p. 156. Giuseppe Pasinati and his brother Giovanni, in a heated competition against Mercandetti, tried to win through unfair methods and finally Giuseppe succeeded in securing the position of master of the Roman mint.

[105] *CNI*, vol. 17, coin 75; Serafini, pl. 159, coin 13; Spaziani-Testa, *I Romani Pontefici*, p. 115, coin 199.

[106] In 1816 Pasinati was commissioned to engrave a scudo with the portrait of the Pope. Apparently the die broke after five or six specimens were struck, and Pasinati, of advanced age by that time, did not re-engrave the dies. Patrignani (*Pio VII*, p. 23) states that he does not believe that this type was rejected by the Pope. It is generally agreed, however, that the Pope was opposed to having his portrait on coins. See also: Martinori, fasc. 23, pp. 18, 27; *RasN*, vol. 27, pp. 68–69; *NCirc*, vol. 18, col. 12061.

[107] Pasinati engraved ten medals during the pontificate of Pius VII. The only significant portrait was used on a medal of year XV (1815), which he copied from a previous portrait engraved by the Swiss medalist Brandt—Patrignani, *Pio VII*, medal 71.

[108] Patrignani (*Pio VII*, p. 27) contends that, with the exception of two noteworthy dies of Mercandetti, there was not a single medal which rose above the level of a stagnant mediocrity during this agitated period of European history.

Toward the end of his life another sculptor, Giuseppe Cerbara, attempted to render his likeness; in fact, a medal issued in the year of the Pope's death was engraved by this artist (fig. 46). The stooped back and the deeply set head indicate the advanced age of the Pontiff, but, unbroken by the continuous adversities of an agitated life, his spiritual forcefulness is still evident. Strong features are presented in an elegant, flowing plasticity. Minutely executed sculptural details enhance this image of lifelong experiences translated into physical traits. The same smile encountered in Pasinati's medal vaguely emerges here from Cerbara's portrait, conveying a sense of benign human understanding, instead of perplexing helplessness.

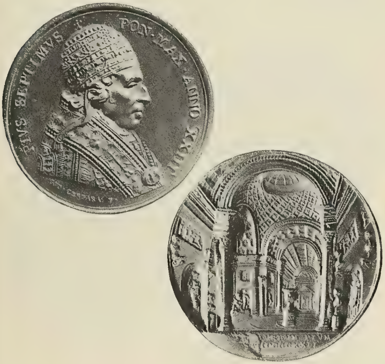

Fig. 46.—Papal Rome, Pius VII, medal, year XXIII [1822]; interior of Museum Pio Chiaramonti[109]
(Div. of Numismatics photo)

Giuseppe Cerbara[110] (1770–1856), and his younger brother, Nicolo, are two outstanding figures in the history of the Roman mint. Giuseppe began his career in the traditional way as a gem engraver, working as an apprentice in the shop of his father, Giovanni Battista, but devoting much of his attention to die engraving for medals. Through unrelenting hard work he built a reputation which opened for him the doors of the Accademia di S. Luca, where he became a member in 1812. Then a vacancy at the Roman mint gave him the opportunity to put his talents at the service of Popes Leo XII, Pius VIII, Gregory XVI, and Pius IX.

A long series of dies for coins struck under Leo XII, the Vacant See of 1829, and Pius VIII came from Giuseppe's workshop. His signature, GIUS. CERBARA or CERBARA IOSEPH, is frequently found on coins and medals for a period of 25 or more years.

An artistic sensitivity combined with complete mastery of technical problems marks his work. His strong individuality searched for new forms to express old emblematic representations that were confined by tradition within fixed patterns.[111] The figure of the Church floating on ethereal clouds, a centuries-old symbol of the spiritual power of the Roman Catholic Church, was used by many artists before him in an unaltered form as a reverse type. But this stiff, archaic figure did not satisfy Cerbara's conception of the personification of religion. A sequence of three variations on this theme (figs. 47–49) reveals his tireless attempts to find more appropriate forms for the concept. The remoteness of the celestial figure had always been indicated by a very flat, receding relief, marked only by strong contour lines.

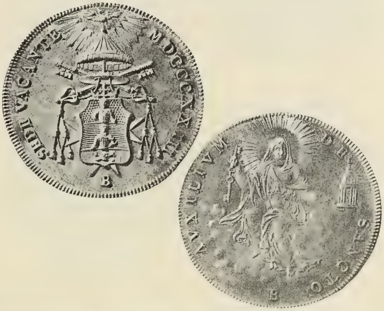

Fig. 47.—Papal Rome, Vacant See, scudo, 1823, Bologna mint[112]
(Photo courtesy American Numismatics Society)

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[109] Patrignani, *Pio VII*, p. 219, medal 108.

[110] *BDM*, vol. 1, p. 386, and vol. 7, p. 17; Thieme and Becker, vol. 6, p. 291; Bolzenthal, p. 306; Martinori, fascs. 23–24, p. 22.

[111] Judging only his medals, Patrignani accused him unjustly of an antique mannerism in vogue since the time of the Hameranis. In *Gregorio XVI*, p. 25, Patrignani concurs with Martinori's statement that the designs of Cerbara are accurate and reveal superior qualities in the artist, although the style is somewhat manneristic.

[112] Spaziani-Testa, *I Romani Pontefici*, coin 204; Serafini, pl. 161, coin 10; Davenport, *European Crowns*, coin 185.

With pagan devotion, Cerbara could conceive of the divine only in perfectly modeled forms, and he embodied the abstraction in the flowing lines and curves of an essentially human body. The traditional heavy folds of the garment were replaced with a soft, veil-like drapery which heightened the ethereal impression created by vaporous masses of clouds.

His continued preoccupation with variations on this theme came to no avail, and regression instead of progress was the result. The exaltation and devotion expressed in his first reverse (fig. 47), where a slight asymmetric displacement of the figure toward the upper edge and the soft radiance of the halo convey divine aloofness, declines eventually into a senseless mannerism, clearly evident in his third version (fig. 49).

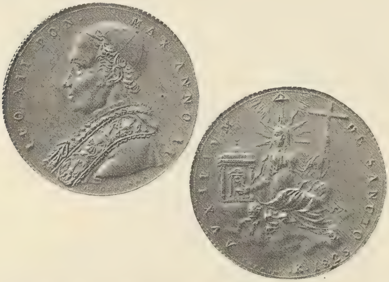

Fig. 48.—Papal Rome, Vacant See, scudo, 1829, Roman mint [113]
(Photo courtesy American Numismatics Society)

The same inclination toward mannerism is expressed in his portrait coins of Pope Leo XII. The brilliant effect of many of his refined portraits on his larger coins is based chiefly on subtle details that fade on smaller coins because of the limited surface. The delicacy of his portraits, with minute lines which blend into the softness of the plastic surface to reveal deep psychological insight, is successfully achieved on the large surface of the scudo (fig. 48), but degenerates on the reduced field of the gold coin (fig. 50) into a lifeless image.

The impression of fragile transparency conveyed by some of his works apparently represents only a phase in Cerbara's artistic evolution and seems to be confined to the duration of Leo XII's pontificate. It is possible that the Pope himself, through the delicacy of his frame, inspired the artist. A later portrait medal of Pius IX struck in 1851 (fig. 51) shows no such qualities. Instead, a youthful, robust exuberance embodied in a noble but superficially treated relief replaces the transcendental, thoughtful frailty of the earlier portrait.

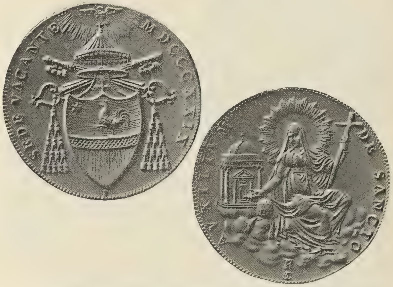

Fig. 49.—Papal Rome, Leo XII, scudo, 1825, Roman mint [114]
(Photo courtesy American Numismatics Society)

Giuseppe, with his young and ardent temperament, tried to break away from the dominating personalities of his predecessors, and the first phase in his activity clearly reveals his tendency to venture into new concepts of content and form. The coin types of Leo XII coincide with this period. Unsure of his new methods and apparently dissatisfied with the results, Giuseppe remodeled some of his compositions again and again. The search for an adequate expression of his artistic ego, however, proved to be

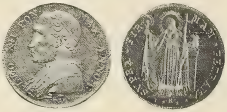

Fig. 50.—Papal Rome, Leo XII, double zecchino or Leonina, 1828, Roman mint [115]
(Div. of Numismatics photo)

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[113] Spaziani-Testa, *I Romani Pontefici*, coin 210; Serafini, pl. 162, coin 7; Davenport, *European Crowns*, coin 188.

[114] Spaziani-Testa, *I Romani Pontefici*, coin 205; Serafini, pl. 161, coin 17; Davenport, *European Crowns*, coin 186.

[115] *CNI*, vol. 17, coin 16; Serafini, vol. 3, p. 377, coin 4.

beyond his capabilities, and his creative resources declined to the mannerism which was noticed in figure 49. Apparently resigned to sacrificing his originality for the safety of an old, well-established tradition, he accepted the eclectic formalism of his time. His personality was completely absorbed by a tradition that was strong enough to perpetuate itself for many decades. In final years only the signature distinguishes Giuseppe Cerbara's works from those of his contemporaries.

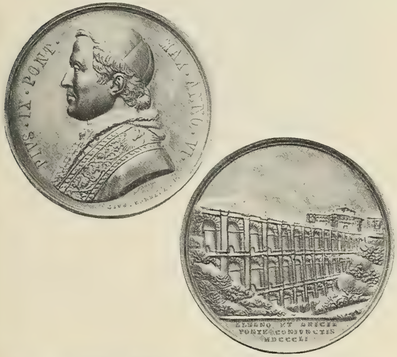
PIVS · IX · PONT · MAX · ANN · VI
ELSENO ET ARICIA PONTE CONIVNCTIS MDCCCLI

Fig. 51.—Papal Rome, Pius IX, medal, year VI, 1851; view of viaduct at Arricia [116] (Div. of Numismatics photo)

Giuseppe is seldom mentioned apart from Nicolo, his younger brother and successor. The tradition which had persisted at the Roman mint, since the Hameranis first imposed the spell of their family on the institution, formed the background for the shaping of both artistic personalities. Their individual responses, however, were very different.

Nicolo Cerbara [117] (1797–1869), of an even more conforming temperament than his brother, showed no tendencies toward outbursts of individuality. An engraver of gems like all his kinsmen, he was associated for almost 30 years (1829–1858) with the Roman mint, where he also served as director. A close friendship with Pietro Girometti induced him to collaborate on a series of medals commemorating famous Italians such as Galileo, Raphael, and Pope Julius II (*Serie iconografica numismatica dei più famosi Italiani*).

An assiduous worker, he produced, in addition to an impressive sequence of medals on Popes Gregory XVI and Pius IX, most of the dies for the papal gold, silver, and copper coinage during the pontificates of Pius VIII, Gregory XVI, Pius IX, the Vacant Sees of 1830 and 1846, and the Roman Republic of 1848. He also engraved the fisherman's ring of Gregory XVI.

Nicolo's work moved imperturbably along an even line of mediocrity. Devoid of the fine sensibilities exhibited by his brother's coinage, his technically perfect creations express an astonishing spiritual indifference. Immobilization, a stiffening of academic formalism, conducive to dry form and cold expression, characterizes most of his work, suggesting the "sacrifice of feeling" attributed by Sutherland to the classical revival of the 19th century.[118] His well-balanced compositions, executed with plastic accuracy, cannot dispel the impression of banality.

The scene of the presentation of the Child Jesus in the temple, created for the reverse of the scudo of Gregory XVI (fig. 52), exemplifies this failing.

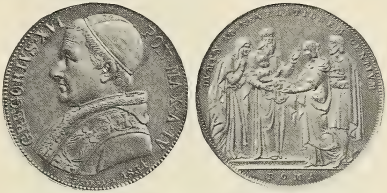

Fig. 52.—Papal Rome, Gregory XVI, scudo, 1834, Roman mint [119] (Div. of Numismatics photo)

Technically well arranged, the scene presents only a flat conventionalism of forms. No subtle vision has imparted life to this essentially static group. The wooden stiffness, accentuated by awkward, almost parallel running folds in the long garments, is not merely an external attribute; it is an expression of the extreme coldness which grips the whole composition of the reverse. The obverse, however, presents a portrait that possesses an unexpected lifelikeness.

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[116] Patrignani, *BCNN* (1947), p. 78.

[117] Thieme and Becker, vol. 6, p. 291; Bolzenthal, p. 306.

[118] *Art in Coinage*, p. 195–209.

[119] *CNI*, vol. 17, coin 14; Serafini, p. 388, coin 47; Spaziani-Testa, *I Romani Pontefici*, p. 123, coin 218; Davenport, *European Crowns*, coin 191.

Purely emblematic types, emphasizing the decorative element, found a better solution. The reverse of the scudo engraved for the Vacant See of 1830 and repeated with slight modifications in 1846 (fig. 53) succeeded in conveying a celestial vision.

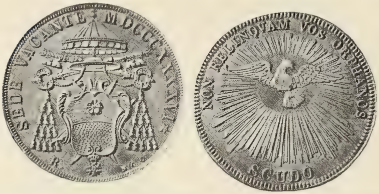

Fig. 53.—Papal Rome, Vacant See, scudo, 1846, Roman mint [120]
(Div. of Numismatics photo)

The halo of rays imparts an airy transparency to the background of the alighting dove. This greatly improved version created one of the subtlest images in modern coin engraving.

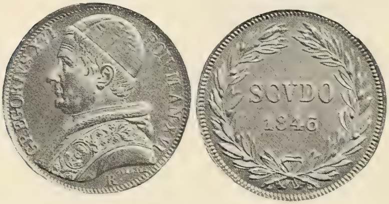

Fig. 54.—Papal Rome, Gregory XVI, scudo, 1846, Roman mint [121]
(Div. of Numismatics photo)

Of a similar decorative nature are the reverses for the silver and gold coinages of Popes Gregory XVI and Pius IX, each coin (figs. 54, 57) bearing a brief inscription enclosed within a laurel wreath.[122] The central inscription is in rather massive letters, probably to satisfy practical more than esthetic purposes. This concise and salient legend apparently fulfilled its practical requirements since even Carl Voigt later adopted the same reverse design.

The subject of the portrait, a challenge to any artistic ability, seemed to impress Nicolo Cerbara hardly at all. His portrait series of the contemporary pontiffs and especially of Gregory XVI betrays little tendency to alter or improve the once-established images. His usual intellectual coldness becomes more evident when he is faced with the problem of reproducing in plastic form not only a physical likeness but a spiritual individuality. Apparently incapable of sensing the depth of a subject's inner life, he limited his portraits to external likenesses. A slight tendency toward idealization, however, was inspired by Pope Gregory XVI, who closely supervised the activity of his artists, trying to suggest versions of his portrait which would show him with more proportioned features. The cameral aide Moroni relates that the Pope often discussed with the mint artists new coin designs or changes of already adopted types.[123] Such supervision certainly would eliminate the slightest inclination toward more original forms of expression.

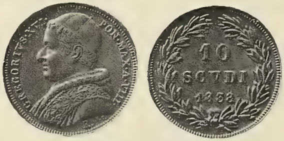

Fig. 55.—Papal Rome, Gregory XVI, 10 scudi, 1838, Roman mint [124]
(Author's photo)

One of Nicolo Cerbara's portraits (fig. 55), expressing only a platitude of form and concept, was adopted as the official portrait for coins and medals. An earlier portrait of the Pontiff (fig. 56) by the same artist, using a more sensitive psychological treatment, apparently did not meet the approval of the Pope since it was never used in later years.

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[120] *CNI*, vol. 7, coin 2; Serafini, pl. 164, coin 1; Spaziani-Testa, p. 127, no. 237; Davenport, *European Crowns*, coin 193. Carboneri (p. 228) considers this coin noteworthy from an artistic point of view.

[121] *CNI*, vol. 17, coin 141; Serafini, p. 389, coin 73; Spaziani-Testa, *I Romani Pontefici*, coin 232; Davenport, *European Crowns*, coin 192.

[122] Carboneri (pp. 229, 241) is impressed with the simplicity of N. Cerbara's coinage of Gregory XVI and of Pius IX: "Sono di una uniformità e semplicità degne di nota che fa un contrasto sigolare colla ricca e multiforme collezione di monete dei Papi anteriori a Gregorio XVI."

[123] Patrignani (*Gregorio XVI*, p. 23) says that the Pope, being aware of the propagandistic importance of portrait medals, tried to minimize the prominence of his large nose and preferred portraits which solved this problem in a more esthetic manner.

[124] *CNI*, vol. 17, coin 55.

Cerbara's portrait of Pius IX (fig. 57), a work from the period of his artistic maturity, attains a higher degree of expressiveness. The vivacious and charming personality of Pius IX seems to have dissipated the earlier coldness of the artist to the extent that an elegant, sophisticated style replaces the earlier formalism. The well-modeled plastic relief renders in simple, clear-cut lines the warm personality of the high potentate.

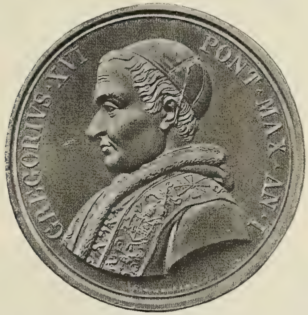

Fig. 56.—Papal Rome, Gregory XVI, obverse of medal, year I [1831] [125]
(Photo from *RZ*)

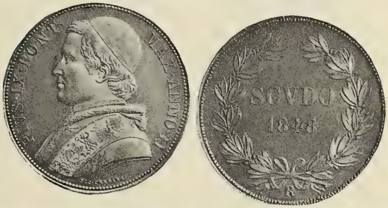

Fig. 57.—Papal Rome, Pius IX, scudo, 1848, Roman mint [126]
(Div. of Numismatics photo)

Bound by the same formalism, but indicating a much higher sensitivity, are the portraits of Pope Pius IX by Bonfiglio Zaccagnini, who signed the dies for the gold scudi between 1853 and 1857 and the bronze quattrini from 1851 to 1854.[127] Little otherwise is known about his activity. Forrer assigns to him some religious medals.

A tendency toward mannerism is evident in Zaccagnini's portrait of Pius IX used for the gold scudo (fig. 58). The same preference for minuteness of detail is employed with better results on a medal from year VII (fig. 59) wherein design and plastic treatment suggest a psychological insight. Nevertheless, the delicately engraved features contrast unpleasantly with the massive jaw, made more conspicuous by the superficial treatment of the surface of the right cheek.

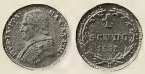

Fig. 58.—Papal Rome, Pius IX, gold scudo, year VIII, 1853, Bologna mint [128]
(Author's photo)

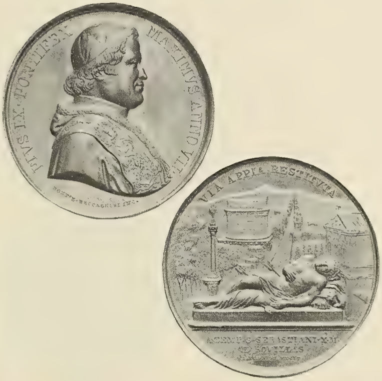

Fig. 59.—Papal Rome, Pius IX, medal, year VII [1853]; view of Via Appia [129]
(Div. of Numismatics photo)

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[125] *RZ*, fig. 605.

[126] *CNI*, vol. 17, coin 12; Serafini, pl. 164, coin 17; Spaziani-Testa, *I Romani Pontefici*, p. 129, coin 240; Davenport, *European Crowns*, coin 194.

[127] *BDM*, vol. 6, p. 712.

[128] *CNI*, vol. 17, coin 101; Serafini, p. 430, coin 311.

[129] Patrignani, *BCNN* (1947), p. 79.

However individual were their distinctions, the creations of these artists were direct products of their time and of its own mentality. One of the purest expressions of the intellectualism of the mid-19th century can be seen in the German engraver Carl Friedrich Voigt, who worked for many years at the Roman mint. His work is an image of his era, with all its merits and defects.

Although Voigt's artistic personality was formed under the guidance of most of the masters of his period, he did not follow any of them in particular. Not an imitator, he proved himself to be a master whose individuality and professional skill were molded and brought to perfection by the great spirits of his tutors.

Carl Friedrich Voigt [130] was born in Berlin in October 1800. His first artistic training was with the goldsmith Friedrich Alexander Vollgold and the engraver Leonhard Posch. At the age of twenty he joined the medallic institute of the Loos family and worked under the direction of Gottfried Bernhardt Loos. Shortly afterward, he became their first engraver. In 1825 he was awarded the academy's first prize for sculpture, which gave him the opportunity to go to London to work at the Royal Mint. The guidance of Benedetto Pistrucci, a master of engraving, and the personal patronage of the Duke of Wellington were of decisive importance in the development of his future career. After six months he went to Paris for further studies and then to Rome. The world-famous gem engraver Giuseppi Girometti introduced him to the art of cameo-cutting. Many gems and especially a cameo representing Bellerophon and Pegasus are evidence of Voigt's exceptional skill in this art.

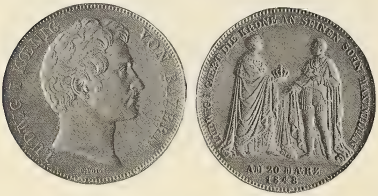

Fig. 60.—Bavaria, Louis I, double taler, 1848 [131]
(Div. of Numismatics photo)

His special aptitudes soon found general recognition and even Albert Thorwaldsen acknowledged his work. Endorsed by the great Danish artist, Voigt was given the assignment to engrave the prize medal for the Accademia Tiberina, which he later joined as a member. Attracted by Voigt's fame as an outstanding engraver, the art-loving King Louis I of Bavaria in 1829 appointed him first engraver at the Munich mint.

During Voigt's activity at this mint, he produced a brilliant series of coin dies for the historic double talers (fig. 60) of the Wittelsbach king.[132] Other assignments for foreign countries, as the beautiful gold and silver coins for Otto I of Greece (fig. 61), a task he executed during his stay at the Munich mint, gave his name international renown. In 1857 he accepted an invitation of Pope Pius IX to work permanently at the Roman mint. He settled in Rome and for almost fifteen years his name appeared on all papal coins and on some of the medals. His days in his adopted country ended when he died suddenly in 1874 in Trieste while on a trip to Germany.

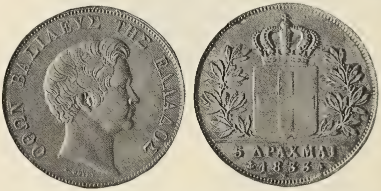

Fig. 61.—Greece, Otto I, 5 drachmai, 1833 [133]
(Div. of Numismatics photo)

Voigt joined the papal mint at the peak of his career, his name already world-famous. A well-rounded personality, molded in the schools of the great masters of his time, he was, nevertheless, an outsider for the Italians, a stranger to their tradition. But he bowed before the ancient civilization and submitted to the rule of traditional papal coin engraving. His coin dies do not deviate in form from those of his

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[130] *BDM*, vol. 6, pp. 305–310, and vol. 8, p. 250; Thieme and Becker, vol. 34, p. 508.

[131] Davenport, *German Talers*, coin 597. This coin commemorates Louis' abdication in favor of his son Maximilian II.

[132] Davenport, *German Talers*, pp. 22–39. For his Bavarian medals, see Habich, *Die Medaillen und Münzen*, and Kull, *Mitteilungen der Bayerischen Numismatischen Gesellschaft* (1885), pp. 1–75.

[133] Davenport, *European Crowns*, coin 115.

Italian predecessors, even though the dies were executed in a totally different spirit.

This artist saw coins as an expression of monarchal prerogative rather than a medium of convenience. As a result, he invested them with all the dignity and, inevitably, all the rigidity of officialdom. Whether created for German principalities[134] or the Roman papacy, his coins present the same idea of monarchic power. Creating the portrait of a monarch, he was primarily concerned with the image of the ruler. Only of secondary importance were the human traits on which the divine prerogative was bestowed. On the same theory, Napoleon I, inspired by the example of Augustus, ordered his artists to render and preserve eternal youth in his features,[135] and the image of Queen Victoria likewise remained unchanged for decades.

Voigt's portraits of Louis I and Maximilian II of Bavaria, Otto of Greece, and Pope Pius IX (fig. 62) suggest Manfredini's portrayal of Napoleon. All are suffused with the same remote dignity, their expressions ageless, their physical likenesses a mere coincidence. It is not the lack of psychological ability to project feeling and thought into the features of a high potentate, or even the inability to express them in plastic form, but rather the deliberate confinement of an individual behind his official personality which characterizes Voigt's work.

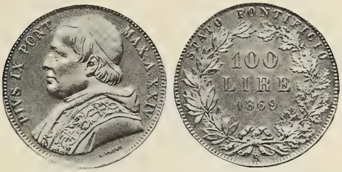
Fig. 62.—Papal Rome, Pius IX, 100 lire, 1869, Roman mint[136]
(Div. of Numismatics photo)

An example, however, of his psychological intuition is the portrait of Pius VIII on a scudo of 1830 (fig. 63), created during Voigt's stay at the Munich mint.[138] The beauty that comes from intellectual qualities and human understanding glows in the features of the aged Pontiff. A perfectly modeled eye accentuates the expression of concentrated intellectuality in this great art lover on the throne of St. Peter, and a mastery of sculptural values helps to portray this image, considered by many as one of the most sensitive portraits in modern coin engraving.[139]

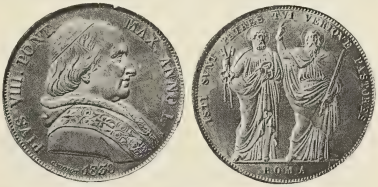
Fig. 63.—Papal Rome, Pius VIII, scudo, 1830, Roman mint[137]
(Photo courtesy American Numismatics Society)

The same calm dignity is seen in the composition of the reverse. Here, a new beauty, resulting from perfect eurythmy of dimension and movement, pervades the statuary representation that was used for centuries by artists as a symbol of the papacy.

Once Voigt was on permanent assignment at the Roman mint, he conformed more closely to the tradition of that institution. The composition of the coins of Pius IX was continued by Voigt in the manner of his predecessors, with a bust of the Pope as the symbol of worldly power on one side and the value and year inscribed in a wreath on the other (fig. 62). This reverse type, created by Nicolo Cerbara, was adapted also to the decimal coinage introduced by Pius IX with the reform of 1866. Apparently only considerations of utility prevailed in the choice of this reverse, since the large but readable letters of the inscription overcrowd the field and disrupt any pleasant balance of composition.

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[134] Voigt engraved coins for the principalities of Baden, Hesse, Saxe-Meiningen, and Württemberg.

[135] Patrignani, *Gregorio XVI*, p. 23n: "De conserver à ses traits une jeunesse perpetuelle."

[136] Serafini, pl. 165, coin 15; Pagani, *Monete italiane*, coin 1504.

[137] *CNI*, vol. 17, coin 6; Serafini, pl. 162, coin 9; Spaziani-Testa, *I Romani Pontefici*, p. 121, coin 212; Davenport, *European Crowns*, coin 189.

[138] Patrignani (*Gregorio XVI*, p. 107) thinks that Voigt must have engraved this coin while in Rome and Patrignani proposes, therefore, to correct Forrer's date of 1829 to read 1830 for Voigt's assignment at the Munich mint. In 1831 Voigt engraved also "The Allegory of the River Tiber" for a medal of the Accademia Tiberina (ibid., medal 68), and Patrignani thinks he prepared it before his departure for Munich during the pontificate of Pius VIII. Since Voigt did outside work at the time, however, he may have modeled it while in Munich.

[139] An interesting fact is that an identical portrait, used as the obverse for the 30-baiocchi piece of 1830, bears Nicolo Cerbara's signature instead of Voigt's.

Despite Voigt's conformity, the likeness of Pius IX on the obverse differs greatly from portraits of this pontiff by other artists. There is an expression of nobility presented with a simplicity which only a mastery of sculptural form can confer. The impassivity of the Pope is merely surface. An air of human kindness in a countenance of great dignity permeates the simple features. Voigt was not a sentimentalist; no impressionistic irregularities disrupt the harmony in his simple balance. A master of form, he achieved a perfect interplay between simple lines and unobtrusive plastic relief. His fame rests upon a classic simplicity of composition and a sobriety of form.

After 1870 no coins were issued by the popes for almost sixty years, until 1930, when the striking of coins—an expression of recognized worldly power—was resumed as a result of the Concordat between the Italian government and the Papacy. Since the striking of the coins and medals of the Vatican is done in a well-established collaboration with the Italian government at the Roman mint, the section devoted to this most recent phase in the minting activity of the Vatican will be discussed in connection with modern Italian coin engravers.

NAPLES

The southern Kingdom of Naples and Sicily, an appanage of the Spanish Bourbons, was torn between the tyranny of their foreign-born kings and the idealistic, impetuous population, which was committed through the secret fraternity of the Carbonari to fight for civic freedom and for national affirmation. Set in motion by the ideals of the French Revolution, surge after surge of patriotic aspirations arose and then were smothered under the reactionary policies of Ferdinand IV. His reign of 67 years on the throne of Naples was a relentless, obstinate battle to maintain his autocratic regime in the face of time and events. Twice an exile during the victorious wars of the French, he later increased his efforts to rebuild his old power on the debris of the Napoleonic regime. With the support of foreign Austrian troops he crushed the patriotic uprising in 1820 and buried his previous concessions under endless political persecutions.

His attitude toward the growing tide of nationalistic movements became a tradition in his family. His son Francis I and his grandson Ferdinand II met the national quest for reform with the point of a bayonet. Neither understood the new and challenging spirit, and instead of leading their country toward a democratic monarchy, they persisted blindly in maintaining their autocratic rule. Finally defeated by time and the patriotic enthusiasm of their peoples, the Bourbon dynasty ceased to reign in Naples in 1861, when this southern monarchy became an integrated part of the united Kingdom of Italy.

The coin designs of the Neapolitan mint offer a good example of the decisive effect which a strong personality can have on the development of an institution. At the Naples' mint the art of coin engraving was bound for decades to mediocrity and platitude because of the domineering spirit of its chief engraver Domenico Perger.[140] Spiritual inertia held him in the line of a tradition that had neither glory nor distinction. The coins and medals which he cut for Ferdinand IV during the last decade of the 18th century display an almost embarrassing primitivism (fig. 64) when compared to better products of some of his contemporaries like Nicola Morghen (fig. 65) or Vincenzo Aveta.[141] Perger seemed to entirely dominate the mint for years; his initials D.P. appear on numerous coins until 1804 when the king, apparently tired of the monotony of his coins, expressed the desire for a radical change at his mint.[142]

Luigi Diodati [143] was appointed master of the mint to replace Antonio Planelli, and under his expert direction operations were completely reorganized. The system introduced by Diodati was one of the most progressive of his time, and many of his innovations were imitated by Tsar Alexander I in perfecting the Russian minting process.[144] Domenico Rebora, one of Diodati's expert technicians, improved the mechanical installations, which gave the mint better production. Diodati himself, after receiving from the Ministry of Finance in 1804 the assignment to create a new silver piastra, attempted to impose a new artistic direction on coin engraving.

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[140] *BDM*, vol. 4, pp. 450–452, and vol. 8, p. 120.

[141] Ricciardi, *Medaglie delle Due Sicilie*, p. 16, medal 43.

[142] Prota and Morelli, *BCNN* (1926), pp. 3–25.

[143] Diodati published a pamphlet about the organization of the mint: *Dello stato presente della moneta nel regno di Napoli o della necessità di un alzamento.*

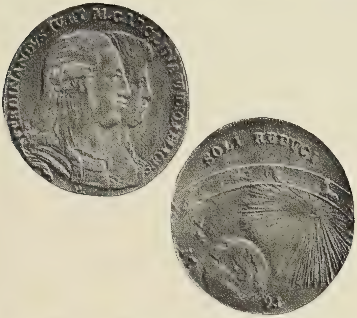

Fig. 64.—Naples, Ferdinand IV and Queen Carolina, medal, 1791 [145]
(Photo from Ricciardi)

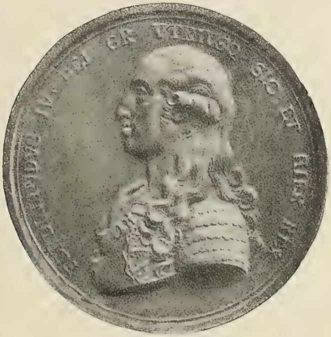

Fig. 65.—Naples, Ferdinand IV, obverse of medal, 1792 [146]
(Photo from Ricciardi)

Perger was forced to rise out of his inertia and to conform to the new policy with an entirely new creation. Inspired by a marble bust of the king by Antonio Canova, he presented a new coin design (fig. 66). It did not meet the approval of Ferdinand and another project was requested with great urgency. Apparently following the directions of the Ministry of Finance, he turned toward English coinage for inspiration. The penny and twopence copper pieces struck by Matthew Boulton for the English Government in 1797 at the Soho mint in Birmingham had carried a raised border which had given the pieces the appearance of a cartwheel, from which was derived the name "cartwheel penny." This innovation was not favorably accepted by the English public since the coins "were found exceedingly cumbrous,"[148] and so the experiment was discontinued, many of the pieces being melted down for their copper content. But outside of England apparently the novelty of this experiment impressed people more than its failure.

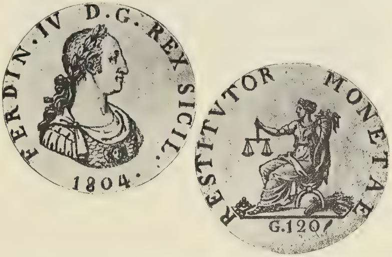

Fig. 66.—Naples, Ferdnand IV, project for piastra, 1804 [147]
(Photo from Prota)

Three among four of Perger's patterns submitted in 1804 for a piastra of Ferdinand IV display the same technique of a raised border. Two patterns, Perger's first project, have the inscription on the border in incused letters,[149] while his third project (fig. 67) has one in raised letters. The latter was approved October 18 and was struck in a small number before the entire issue was terminated. The composition of this coin is very well balanced. The small bust of the monarch in Roman attire, executed in Perger's habitual low relief, is not lacking in artistic value, and can even be considered one of his better coin engravings. The massivity of the strong profile is pleasantly balanced by the high relief of the surrounding border. The reverse has an impressive simplicity, harmonious in its design and distribution of letters. Interestingly, the same obverse and reverse designs transposed to a standard, flat planchet with no raised border (fig. 68) completely lose their esthetic appeal: the bust appears awkward and too compact; the reverse, insignificant.

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[144] Prota and Morelli, *BCNN* (1926), p. 4; D'Incerti, *RIN* (1959), p. 36.

[145] Ricciardi, *Medaglie delle Due Sicilie*, p. 17, medal 46.

[146] Ibid., p. 17, medal 47.

[147] Prota, *NumR* (1941), vol. 7, pp. 113–117.

[148] Craig, *London Mint*, p. 265. See also: Dickinson, *Matthew Boulton; BDM*, vol. 1, p. 235.

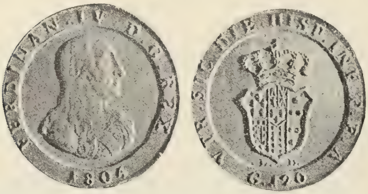

Fig. 67.—Naples, Ferdinand IV, piastra, 1804 [150]
(Photo from Pagani)

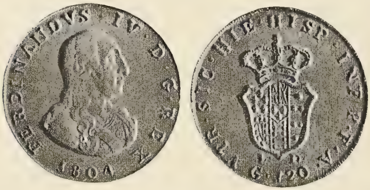

Fig. 68.—Naples, Ferdinand IV, pattern piastra, 1804 [151]
(Photo from Pagani)

Perger's patterns did not receive necessary appreciation, nor did his dies seem fit for production. From the earlier, first project of the piastra of 1804 only a few specimens could be struck before the dies broke, while the second project was rejected without much consideration by the Superior Council of Finances. Lengthy wrangles widened his rift with the new administration. Against their regular procedure, his superiors gave the commission for the piastra project to two artists outside the mint, Filippo Rega for the obverse dies and Michele Arnaud for the reverse.

Michele Arnaud, more a technician than an artist, was well known in Naples as a button manufacturer. He had come in contact with the mint through occasional use of their presses. Later he introduced some mechanical changes and, in collaboration with Rega, he developed certain techniques for improving the die preparation. He was father of the engraver Achille Arnaud and the grandfather of Luigi Arnaud.

Filippo Rega [152] (1761–1833) was born in Chieti but lived with his father, an antique dealer, in Naples. In 1776 he went to Rome to study design and gem engraving with the famous Giovanni Pichler. Twice he won the prize of the San Luca Academy of Arts. He returned after twelve years to Naples with an established reputation and found quick acceptance among the aristocracy and at court. The king commissioned him with the cutting of a portrait cameo of Prince Francis, while for Sir William Hamilton, the British envoy, Rega engraved a portrait of Lady Emma. He also cut a portrait of Napoleon I in agate, of Joseph Napoleon in onyx, and other portrait cameos of Joachim Murat and his family. His signature, ΡΗΓΑ or ΡΕΓΑ, can still be seen on many of his works. The field in which he excelled was that of mythological subjects; his cameos were of such exquisite quality that often they passed for the work of an ancient Greek master.[153] In 1803 the French Institute elected him a member, and in 1804 his first assignment with the mint marked the beginning of a productive relationship which continued to his last days in 1833.

Rega's emotional temperament set the pattern of his entire life. His works were the creation of a few fugitive moments of inspiration while he let other amusements fill his days. Worries and penury were the inevitable result. It was said that in order to cover his debts he had to sell even his beloved harp and hence give up his activity as harpist at the court. He died in poverty.

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[149] Pagani, *Prove e progetti*, coins 751–752.

[150] Pagani, *Prove e progetti*, coin 749. See especially D'Incerti, *RIN* (1959), p. 37.

[151] Pagani, *Prove e progetti*, coin 750.

[152] For further information on Rega, see: *BDM*, vol. 5, pp. 58–60, and vol. 8, p. 152; Thieme and Becker, vol. 28, p. 82; Forrer, *RasN* (1908), pp. 91–94; *BCNN* (1926), pp. 16–19; Colucci, *BCNN* (1942), pp. 36–45; Siciliano, *Medaglie Napoletane*, pp. 1 ff.; Prota, *Giornale d'Arte* (1925).

[153] Siciliano, *Medaglie Napoletane*, p. 1. Forrer (loc. cit.) also mentions the "unattainable velvety polish" of his cameo portraits.

Rega's work draws inspiration from the master of neoclassicism, Antonio Canova. The same serene perfection embodied in exquisitely modeled relief characterizes Rega's creations. Gem engraver by profession, he transposed the concepts of cameo cutting to die engraving. A well-rounded plasticity with a subtle interplay of chiaroscuro confer a high degree of grace and expressiveness to his portraits.

His activity at the mint was confined to creating and preparing the model for the obverse; [154] the transposition to steel work was done by another, younger artist, who specialized in die engraving. In a petition to the king in 1815,[155] Perger mentions the fact that while he was able to do his own complete die work, Rega had to be helped by Giovanni Martino and Domenico Rebora, both skilled in the technique of steel engraving. This circumstance helps reveal why all the coins and many of the medals engraved at the Naples mint after 1804 were anonymous. Separate artists would be assigned to design the obverse and reverse.[156] Some artists like Rega and his successors would create only the model in plaster (or the main punches) and would direct the final execution while other, younger, or less important artists actually finished the die sinking. When the principal punches, i.e., the portrait for the obverse and the coat of arms for the reverse, prepared by the two main engravers, were passed on to these minor artists, the latter often completed the dies by directly engraving the additional decorative elements. This system of combining various punches (also adopted by today's coin engravers) results in such a close interrelation between creative and executing artist that it is almost impossible to draw a clear line between individual creations. Artistic peculiarities, individual style, and creative personalities are intermingled in a common creative process.

In 1804 a "contest" between Perger and Rega was decided in the latter's favor. Rega's project for the piastra (fig. 69) was accepted and 300 ducats were paid for his work.[158] Although using the same technique of the raised border adopted previously by Perger, this coin displays a superior treatment. The massive border of the English "cartwheel" had formed an essential element in Perger's pattern. In Rega's composition it shrinks to a decorative element,[159] indicated only by two concentric circles. The bust of the king, to which Rega's classical sense of proportion added an unexpected beauty, completely occupies the field of the coin and dominates the whole composition. In this portrait the same, strong, aquiline features of Ferdinand IV which had acquired almost an effect of caricature in Perger's version, seem to impart nobility and energy to the face of the monarch. On the reverse, basically similar to Perger's design, Rega reduces the massiveness and accentuates the vertical line of the composition.

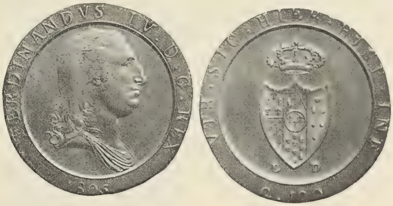
Fig. 69.—Naples, Ferdinand IV, piastra, 1805 [157]
(Div. of Numismatics photo)

The change of regime in Naples in 1805 did not hurt Rega's career; his merits were also recognized by the Bonapartes. In fact, in December 1806 Joseph Bonaparte conferred on him the title of *Maestro d'incisione sopra pietre dure* (master of engraving) at the Royal Academy of Arts and Design in Naples.[160] Rega, continued his activity at the mint. We assume however, that the unsigned piastra of Joseph

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[154] Recorded are his dies for the 3-, 5-, and 10-centesimi pieces, 1813, with the portrait of Murat. He also created the dies for the gold 20- and 40-lire pieces of 1813 and for the silver coinage of that year.

[155] Cf. Siciliano, *Medaglie Napoletane*, p. 5.

[156] Cosentini *CagS* (1914), vol. 4, no. 1, pp. 22–23; D'Incerti, *RIN* (1959), pp. 50–51.

[157] Cagiati, *Le monete delle Due Sicilie*, fasc. 5, p. 79, coin 5; D'Incerti, *RIN* (1959), p. 62, coin 6; Davenport, *European Crowns*, coin 162.

[158] Colucci, *BCNN* (1942), p. 40. Prota and Morelli (pp. 3–25) mention that only 150 ducats were paid to Michele Arnaud for the reverse model.

[159] For a medal of 1807, see Ricciardi, medal 76. Rega used the same die, replacing with a wreath only the inscription within the border.

[160] Siciliano, *Medaglie Napoletane*, p. 8.

Bonaparte (fig. 70), struck between 1806 and 1808 from a model furnished by Rega, was engraved by Vincenzo Catenacci. This assumption can be supported by the fact that a medal of 1805, bearing a similar portrait, was signed by Rega for the obverse and by Catenacci for the reverse, indicating that they were working together.[162]

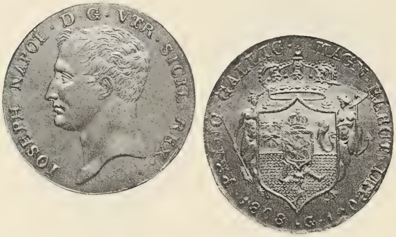

Fig. 70.—NAPLES, JOSEPH BONAPARTE, piastra, 1808 [161]
(Div. of Numismatics photo)

Rega's activity at the mint increased during Joachim Murat's reign from 1808 to 1815. But never was Antonio Canova's influence more evident than in the portraits of Murat by Rega and his contemporary Nicola Morghen, who created the beautiful 40-franc piece of 1810 [163] (fig. 71). Inspired by the classical impassiveness of Canova's portrait of Murat,[164] Rega's interpretation, although permeated by the sovereign's aloofness, breathes more warmth. Two coin dies, the 12 carlini of 1809–1810 (fig. 72) and the 5 lire of 1812–1813 (fig. 73), are extant; with the head of Murat facing left and right, both portraits, although unsigned, are undoubtedly the creations of Rega.[168] In fact, the same head design (facing left) appears on numerous medals [169] from 1809 to 1811, while the later design was used for the obverse of other medals struck between 1811 and 1813.[170] Some of the medals were engraved in a low relief generally adopted only for coins.[171] Ordinarily, the

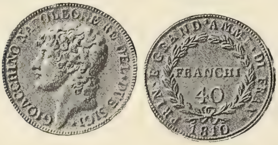

Fig. 71.—NAPLES, JOACHIM MURAT, 40 franchi, 1810 [165]
(Author's photo)

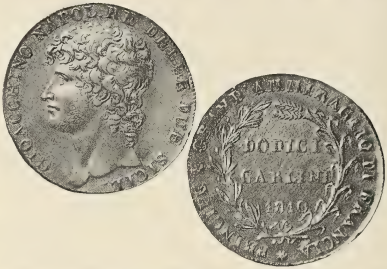

Fig. 72.—NAPLES, JOACHIM MURAT, 12 carlini, 1810 [166]
(Div. of Numismatics photo)

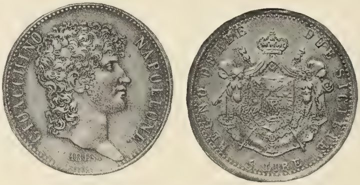

Fig. 73.—NAPLES, JOACHIM MURAT, 5 lire, 1813 [167]

portraits for medals based on the same model as the coin have a more pronounced plasticity, which considerably enhances their physiognomic and sculptural qualities.[172]

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[161] CAGIATI, fasc. 5, p. 86, coin 1; DAVENPORT, *European Crowns*, coin no. 165.

[162] COLUCCI (*BCNN*, 1942, pp. 36–45) suggests that Catenacci is the engraver of the medal.

[163] This coin type, signed with N.M., was engraved by Nicola Morghen in 1810 in competition with Achille Arnaud (PROTA, *BCNN*, 1931, pp. 14 ff.). See also: CARBONERI, pp. 139–141; D'INCERTI, *RIN* (1959), p. 39.

[164] See COMANDINI, *L'Italia nei cento anni*, vol. 1, p. 827.

[165] PAGANI, *Monete italiane*, coin 261a.

[166] CAGIATI, fasc. 5, p. 92, coin 4.

[167] Ibid., p. 98, coin 2; PAGANI, *Monete italiane*, coin 265a.

[168] In 1812 the dies for the 5, 2, and 1 lire were sent to Paris to be approved by Napoleon; in 1813 Rega prepared other dies for the gold and silver coinage and also for the 3, 5, and 10 centesimi.

[169] RICCIARDI, medals 81, 82, 83, 86, 94. Especially well known are 81 (*Per la formazione della Piazza Murat*) and 94 (*Pel ritorno dalla campagna di Russia*).

[170] Ibid., medals 87, 93; LARIZZA, *Gli ultimi due secoli delle Due Sicilie*, pl. 35.

[171] RICCIARDI, medals 81–83.

Done by the same artist, these two portraits (figs. 72, 73) differ essentially, revealing Rega's versatile range as a portraitist. The first portrait accentuates the classical eurythmy of line and relief, sacrificing individuality to beauty; the second and later portrait disrupts this symmetry and imparts personal character. The first is Rega's subjective interpretation of an idealized young hero who daringly conquered royalty. Later, certain particularities of a more human aspect, a defiant pursing of the lips, a coldly domineering eye, reveal deeper insight of the artist, or perhaps a better knowledge of Napoleon's favorite. The latter portrait won much admiration at court, and some proofs of the 5-lire 1812 were sent by Queen Carolina to Paris to be seen by her brother, Napoleon. Other proofs of Rega's dies for the decimal coinage, from 5 lire to 50 centesimi, were sent as models to the mint in Milan.[173]

The untimely death of his king before an execution squad at Pizzo, Calabria, October 1815, did not affect the destiny of Filippo Rega. Benevolent recognition was also bestowed on him by the returning Bourbon king, Ferdinand IV, now known as Ferdinand I.

And even higher honors were in store for Rega. In 1822 he was commissioned by the king to teach engraving at the newly founded Istituto di Belle Arti and in 1829, as part of the general reform of the mint (*Riforma del Gabinetto dei conj nella zecca di Napoli*), a *Gabinetto d'Incisione* (Engraving Cabinet) was instituted as an annex to the mint under his supervision. As director of the Engraving Office he had, among other obligations, to prepare the models for coins and medals. After Diodati retired in 1825 as director of the mint, the tradition of having coin dies initialed by the *maestro della zecca* ceased. Only medals were so marked. In fact, since 1829 the medals issued by the Neapolitan mint always bear the initials or name of the director of the Engraving Office accompanied by the letters INV. or DIR. (invented or directed), the name of the engraver with INC. or FEC. (*incise* or *fece*=engraved or made) and the initials of the director of the mint, with the title M.P. (*maestro di prova*).

During Rega's activity at the mint, he was assisted by many young artists, some trained personally by him at the Engraving Office. Among them were: Vincenzo and Scipione Catenacci, Fortunato Molinari, Francesco d'Andrea, Achille Arnaud, and Michele Laudicina. Some of these artists signed medals engraved from Rega's designs. Vincenzo Catenacci, his successor at the Engraving Office, appeared to be his favorite collaborator; many medal obverses bearing the portrait of Ferdinand I (IV), Francis I, or Ferdinand II were signed by both Rega and Catenacci.[174] After 1830 the name of d'Andrea[175] as well as of Laudicina[176] appear also in conjunction with Rega's signature. Medal reverses were signed during the same period by Laudicina, and especially by Achille Arnaud,[177] always accompanied by an F. REGA DIR.

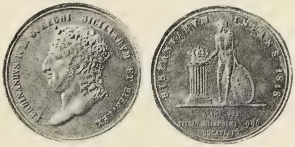

Fig. 74.—Naples, Ferdinand I, 15 ducats, 1818 [180]
(Photo courtesy American Numismatic Society)

The portrait of King Ferdinand I (IV) by Rega, engraved by Catenacci,[178] was used on the entire gold, silver, and copper coinage of 1818,[179] an example of which is the gold 15-piastre piece (fig. 74). This issue presents an unusual feature: a golden band encircles the heavy locks of hair.[181] The custom of vesting rulers with the regalia of power had fallen in disuse for centuries, and even Louis XIV of France, the prototype of absolutistic power, is usually represented in his mature years as bareheaded or with a laurel wreath. But with this crown, emblem of monarchic power, Rega certainly was alluding to the reactionary monarchy introduced by the king.

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[172] Ibid., medals 86, 87, 93, 94.

[173] Prota, *NumR* (1939), p. 149.

[174] Ricciardi, medals 129, 152, 155, 156, 158.

[175] Ibid., medals 133, 146, 151.

[176] Ibid., medals 158, 160.

[177] Ibid., medals 133, 146.

[178] Sjciliano, *BCNN* (1938), p. 45.

[179] The same head was already in use in 1816 on 5- and 8-tornesi pieces. For the monetary reform of Ferdinand I and the monetary law of 1818, see: Carboneri, pp. 210–212, 217n; D'Incerti, *RIN* (1959), pp. 42–43.

[180] Cagiati, p. 109, coin 1; D'Incerti, *RIN* (1959), p. 84, coin 72.

[181] The same portrait, executed only in high relief, has been used for many medals, all unsigned. See: Ricciardi, medals 106, 113, 117, 129; Larizza, pl. 36.

This head of Ferdinand I is a highly idealized portrait of the aged king. The patrician features hardly suggest a likeness of the man who reintroduced the "whole apparatus of despotism," when "freedom was strangulated on the gallows and smothered in dungeons." [182] A symbol of royal power by the grace of God, his aspirations an anachronism, his acts an offense against liberty, Ferdinand I died tormented by the prospect of the rising movement of national freedom which was advancing inexorably. Political events, however, did not have any effect on Rega's work; impassively he served them all, godlike heroes or human failures, glorifying the symbol they represented rather than the human beings they were.

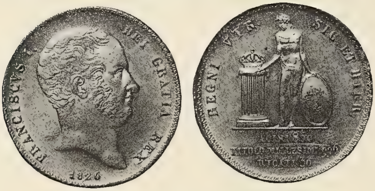

Fig. 75.—Naples, Francis I, 30 ducats, 1826 [183]
(Div. of Numismatics photo)

Ferdinand's successor, Francis I (1825–1830), a weak and timorous personality, was a vacillating figure on the royal throne. Rega tried again to embellish, if not to idealize, his king, however trivial the figure. During the short reign of Francis I, only a single portrait of him was used for the gold, silver, and copper coinage (fig. 75). A similar representation was also used on many medals [184] signed by Francesco d'Andrea, Vincenzo Catenacci, and even Andrea Carriello. Although different in execution from a medal, with the low relief typical of Neapolitan coins in this period, the portrait on this coin resembles more closely the portrait on the medals signed by d'Andrea (fig. 76) and we are safe in assuming that he was the artist who executed it.

The subtle and well-flowing plastic forms display a genuinely human serenity, which contrasts greatly with a contemporary portrait of the king by the French medallist Jean Jacques Barré (fig. 77). On the other hand, the portrait signed by Catenacci (fig. 78) is a more realistic, less flattering interpretation of the original model by Rega.

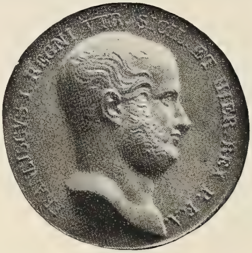

Fig. 76.—Naples, Francis I, obverse of medal by d'Andrea [185]
(Photo from Ricciardi)

Young King Ferdinand II (1830–1859), who succeeded his father at the age of eleven, reigned for 29 years under the most contradictory conditions. Antagonized by the Liberals and the Carbonari, haunted by the terror of sedition, he wavered between progressive and despotic methods before finally adopting a reactionary policy. "Re Bomba" (King Bomb)

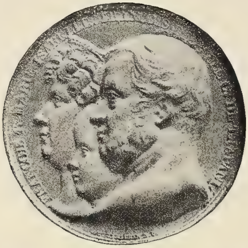

Fig. 77.—Naples, Francis I, obverse of medal, 1830 [186]
(Photo from Ricciardi)

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[182] Cagiati, p. 103.

[183] Ibid., p. 119, coin 2; D'Incerti, *RIN* (1959), p. 98, coin 95.

[184] Ricciardi, medals 146, 152, 154–157.

[185] Ibid., medal 146.

[186] Ibid., medal 147.

was the nickname given him by the Italians after the bombing of Palermo during the revolts of 1848.[187] Cagiati sees in his reign, as in his coinage, three distinct periods: the first marked by a beneficial progress; the second, by tumultuous changes during the revolutionary years; and the third, his last period, by reactionary despotism.[189] To discern clearly these fluctuations throughout his coinage is difficult, although the first period does present a parallel development in his coins.

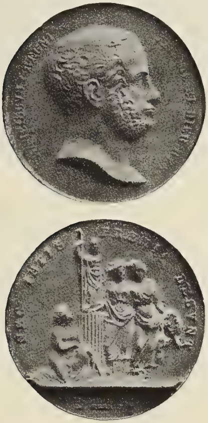

Fig. 78.—Naples, Francis I, medal by Catenacci [188]
(Photo from Ricciardi)

The plain, unbearded head of the young king, copied by Catenacci (fig. 79) and Carriello (fig. 80) from a model by Rega, was used for the striking of medals between 1830 and 1840. A similar bust of Ferdinand II, conjoined with a bust of Queen Maria

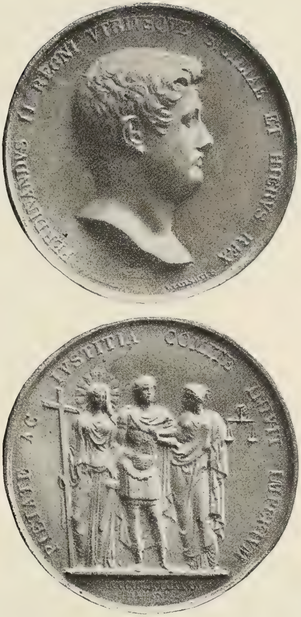

Fig. 79.—Naples, Ferdinand II, medal 1830 [190]
(Photo from Ricciardi)

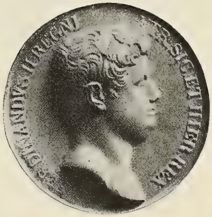

Fig. 80.—Naples, Ferdinand II, obverse of medal, 1831 [191]
(Photo from Ricciardi)

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[187] Larizza, p. 57.

[188] Ibid., medal 154.

[189] Cagiati, fasc. 5, p. 126. See also D'Incerti (*RIN*, 1959, p. 46), who also divides Ferdinand's coinage into three periods: (1) 1831–1839, characterized by a beardless portrait of the king; (2) 1840–1850, the king wearing a slight beard; (3) 1851–1859, the king having a heavy beard. (The gold coinage shows an intermediate type from 1850 to 1852.)

[190] Ricciardi, medal 158.

[191] Ibid., medal 166.

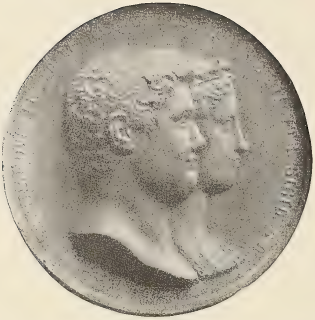


Fig. 81.—Naples, Ferdinand II, and Maria Christina, obverse of medal, 1834 [192]
(Photo from Ricciardi)

Christina, was used on a medal (fig. 81) signed by Rega and executed by Laudicina.[193]

The portrait adopted for the gold, silver, and copper coinage (fig. 82) from 1831 to 1835, or even 1839 to 1841, is undoubtedly copied from Rega's same model.

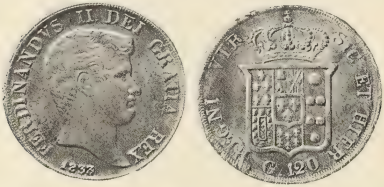
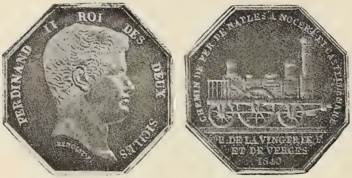


Fig. 82.—Naples, Ferdinand II, piastra, 1833 [194]
(Div. of Numismatics photo)

Since it is difficult to trace similarities between the more linearly treated engraving of coins and the high, rounded relief of medals, doubt arises as to whom to attribute the die execution, whether to Carriello or to Laudicina. To the latter point certain technical characteristics, as the treatment of hair and the general design. A puzzling fact is that the only medal bearing the exact same portrait as the coins is one struck in 1840 on an octagonal planchet for the inauguration of the first Italian railroad (fig. 83),



FERDINAND II ROI DES DEUX SICILES
CHEMIN DE FER DE NAPLES A NOCERA ET A CASTELLAMARE
R. DE LA VINGTRIE E ET DE VERGES
1840

Fig. 83.—Naples, Ferdinand II, octagonal medal, 1840; commemoration of railroad from Naples to Nocera [195]
(Photo from Ricciardi)

a medal which clearly displays, under the king's head, the signature of a medallist called Benoist, whom this author is unable to identify.

One of Rega's collaborators was Achille Arnaud [196] (1790–1839), son of Michele Arnaud. In his younger years Achille had assisted his father in the engraving of coin dies. Later he was appointed *primo incisore dei rovesci* (first engraver of reverses) and in this position he prepared most of the punches for inscriptions or ornamentations.[197] Many of his works are concealed by anonymity, and we can discern very little about his artistic qualities from the few signed medals. In Ricciardi's work on Neapolitan medals only two engravings (133 and 146) show his signature on the reverse. The medal struck in 1825 has only a simple emblematic representation, while the second one, from 1830 (fig. 84), displays a complex composition of anemic inspiration and poor execution.

In 1810 Achille Arnaud was commissioned to create a 40-franc piece for the new coinage of Joachim Murat, but his project was rejected by the director of the mint, G. De Turris, as technically imperfect. Very few of these 40-franc pieces survive since they were consigned to the melting pot in December of the same year.[198] We are inclined to assume that the well-designed and pleasant reverses of the Neapolitan silver coins as well as the standing divinity (fig. 75) used on the reverse of the gold coinage during those years were all his work. Unassumingly he continued his activity after Rega's death, assisting Vincenzo Catenacci in the latter's work at the Engraving Office up to his own death in 1839.

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[192] Ibid., medal 162.

[193] Michele Laudicina, a cameo and shell engraver from Trapani, was appointed engraver for reverses and medals. The director of the mint, Baron F. Ciccarelli, had words of high praise for his skill as diesinker. See Siciliano, *BCNN* (1939), p. 9.

[194] Cagiati, fasc. 5, p. 136, coin 3; D'Incerti, *RIN* (1959), p. 115, coin 172; Davenport, *European Crowns*, coin 172.

[195] Ricciardi, medal 171.

[196] Siciliano, *Medaglie Napoletane*, p. 3.

[197] Siciliano, *BCNN* (1939), p. 13.

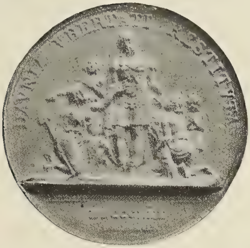

Fig. 84.—Naples, Francis I, reverse of medal, 1830 [199]
(Photo from Ricciardi)

Filippo Rega died in 1833, but his designs and models continued to be used for many years.[200] His successor at the mint was Vincenzo Catenacci, whose signature followed by the customary DIR. (*direxit*= directed) can be seen on medals issued during 1836.[201] The coins continued to be anonymous.

We have little information about the life of Catenacci [202] and his activity, beyond his birth in 1786 and his death at Naples in 1855. Siciliano discloses that he was a favorite of Rega, who promoted the younger man's career at the mint.[203] In 1829, at the age of 43, he was named on Rega's special recommendation *primo incisore dei ritti* (first engraver of obverses). He followed Rega to the Engraving Office where he worked until his death in March 1855. A son, Scipione Catenacci, also worked as an engraver.

Since Vincenzo spent most of his life at the mint under the spiritual guidance of Rega, his activity was limited to the work of faithful copyist and die-sinker and he did not have the opportunity to develop his own artistic personality. None of his works can be distinguished by more than a studied precision in technical execution. His products are barren of the distinguishing mark of an individual style.

Among the medals engraved by Catenacci from designs by Rega can be mentioned the funeral medal of Ferdinand I (1825),[204] another medal commemorating the return of Francis I from France,[205] the death medal of the king in the same year,[206] the obverse of the medal commemorating the accession of Ferdinand II in 1830,[207] and a few prize medals. From the subject of the previous medals it can be seen that he was always given the highest assignments even though the quality of his work did not fully justify it. His portraits, inert and insignificant, cannot compare with similar works by engravers like D'Andrea and especially Carriello. The reverses show limited plastic qualities and his technique was unsuited to highlighting the dramatic points in Rega's original drawings.

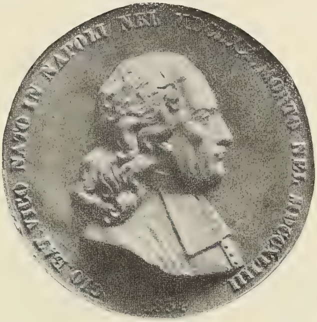

Fig. 85.—Naples, obverse of medal commemorating Giovanni Batistta Vico, 1854 [208]
(Photo from Ricciardi)

A medal dedicated to the Neapolitan philosopher Giovanni Battista Vico and signed only by Vincenzo Catenacci (fig. 85) appears to be an original composition of his. It can hardly be called more than mediocre. Once his sponsor was gone, Catenacci apparently did not have sufficient prestige to assert himself at the mint. His signature disappears from the medals early in 1836 to reappear only sporadically in 1837. In the same manner, the signatures of Carriello or d'Andrea are accompanied from that point on only by the name of the new director of the mint, Baron Francesco Ciccarelli, and, after a few years, even this procedure was not regularly followed.

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[198] Prota, *BCNN* (1931), pp. 14–17.

[199] Ricciardi, medal 146.

[200] See the medal for 1836 (Ricciardi, medal 166) with Rega's signature.

[201] Ibid., medals 163, 164.

[202] *BDM*, vol. 1, p. 360, and vol. 7, p. 164; Thieme and Becker, vol. 6, p. 184; Bolzenthal, p. 307; Siciliano, *Medaglie Napoletane*, p. 2.

[203] *Medaglie Napoletane*, p. 2.

[204] Ricciardi, medal 129.

[205] Ibid., medal 151.

[206] Ibid., medal 152.

[207] Ibid., medal 158.

[208] Ibid., medal no. 210.

Regrettably we have very little information about Francesco d'Andrea, one of Rega's very able assistants. His name was mentioned in connection with Rega as early as 1809, when Rosmina Colucci[209] identified him as the probable engraver of the medal commemorating the founding of Murat Square in Naples.[210] The height of his career, which we can deduce from his signed medals, embraces a period of approximately two decades, from the early twenties to the late thirties, with its peak achieved during the reign of Francis I, 1825–1830. The warm interpretation of Francis' portrait (fig. 76), which carries d'Andrea's signature when the portrait appears on some of the medals,[211] was apparently the selection for the obverse of the entire gold (fig. 75), silver, and copper coinage of this king.

Confined to engraving obverses, according to the tradition of the Neapolitan mint, d'Andrea worked on few reverses. Also, he apparently did not have any special aptitude for compositions. A premium medal from 1826 (fig. 78), representing an allegorical group on the reverse, confirms this supposition. His artistic qualities, sensitivity and subtle treatment of relief, can be traced only vaguely in this composition.

The portrait of young King Ferdinand II and of Queen Maria Theresa on their wedding medal of 1837 (fig. 86), a later work of d'Andrea, was highly praised because the artist had to create the portrait from memory and imagination. The same plump features of somewhat Neronian cast can be compared to a similar portrait by another artist used on the largest denominations of the gold, silver, and copper coinage between 1839 and 1851 (fig. 87).

This work leads us into one of the most intricate and puzzling series of portrait coins in the Neapolitan mintage. During the 29 years of his reign, Ferdinand II, who never posed for a coin, had a variety of portraits on his coinage. With the exception of the first, young, beardless head (fig. 82), designed by Rega during the latter's final years at the mint and used in a single version on the coinage from 1831 to 1839, we are completely in the dark as to whom to ascribe the later portraits. Since the archives have not disclosed any precise documentation,[213] our designations are purely conjectural, obtained through personal interpretation of the stylistic characteristics of the various engravers.

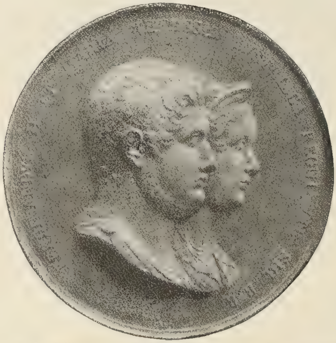

Fig. 86.—Naples, Ferdinand II and Maria Theresia, obverse of wedding medal, 1837[212] (Photo from Ricciardi)

The guiding hand of a master was lost after the death of Rega, and judging from the medals of that period, Vincenzo Catenacci, Rega's successor, apparently was unable to assert himself effectively. Studying the portrait of the king after 1833, the year of Rega's death, one suspects that each artist was on his own in creating and interpreting the likeness of the king. With the exception of two medals in 1836,[214] on which Michele Laudicina's signature is followed by V. CATENACCI DIR., all the other medals bear only the signature of the artist, accompanied occassionally by the name of the director of the mint, Baron Francesco Ciccarelli.

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[209] Colucci, *BCNN* (1942), pp. 36–45.

[210] Ricciardi, medal 81.

[211] Ibid., medals 133, 146, 151.

[212] Ibid., medal 168.

[213] An excerpt from a letter (Naples, November 3, 1958) from Mr. Giuseppe De Falco, a well-known expert in the Neapolitan series, may serve to confirm this:

> As I mentioned in my previous letter, because of my limited knowledge on the subject, I wanted to approach Miss Eugenia Majorana, the late Mr. Cagiati's daughter, who in addition to being an undisputed authority in the field of the coinage of southern Italy is, for professional reasons, in contact with all the collectors and students of modern Neapolitan coins. Yesterday I was able to see my good friend, to whom I had already communicated your request some time ago. Unfortunately she could not tell me more than you would know already. Nobody up to now has done any systematic research in the fascicles of the last fifty years of the Bourbon mint in Naples.

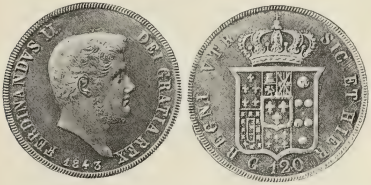

Fig. 87.—Naples, Ferdinand II, piastra, 1843 [215]
(Div. of Numismatics photo)

Among the earlier portraits in this series is the head of Ferdinand II, used on the largest denominations in gold, silver, and copper between 1839 and 1851 (fig. 87). Although certain similarities with d'Andrea's earlier mentioned work (fig. 86) cannot be denied, we are inclined to attribute this unsigned portrait to Andrea Carriello. Several reasons support this contention. The fact that the larger coins all carried the same portrait between 1839 and 1859 suggests that this honor was bestowed on a single capable artist. Because Carriello reveals such high quality in his signed work and because he was a favorite of Rega, we feel safe in assuming that Carriello was the artist assigned to this project. Finally, as supporting evidence, a premium medal (fig. 88), definitely by Carriello, presents an almost identical portrait.

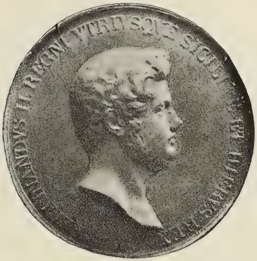

Fig. 88.—Naples, Ferdinand II, obverse of premium medal, 1839 [216]
(Photo from Ricciardi)

A series of earlier portraits of Francis I and of young Ferdinand II [217] established Carriello as the most sensitive portraitist in the whole group (fig. 89).

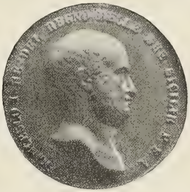

Fig. 89.—Naples, Cariello's First Medal, obverse dedicated to Francis I [1830] [218]
(Photo from Ricciardi)

A fine interplay of planes, effectively accentuated by a few shadows, among which are subtlely interwoven spiritual and emotional expressions, denote a master of portrait engraving. Suffused with warm, deep feeling his work runs counter to the conventionalism of an official portrait.

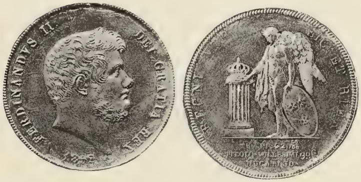

Fig. 90.—Naples, Ferdinand II, 30 ducats, 1852 [219]
(Div. of Numismatics photo)

One of the most realistic works in this series is a portrait of Ferdinand II that was used only on the gold 30-ducat pieces between 1850 and 1852 (fig. 90).

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[214] Ricciardi, medals 163, 164.

[215] Cagiati, fasc. 5, coin 15; D'Incerti, *RIN* (1959), p. 120, coin 183; Davenport, *European Crowns*, coin 174.

[216] Ricciardi, medal 249.

[217] Ricciardi, medals 157, 166, 167.

[218] Ibid., medal 157.

[219] Cagiati, fasc. 5, coin 13; D'Incerti, *RIN* (1959), p. 107, coin 127.

There are no signed medals of a similar design which could help us determine the artist, but the psychological finesse and the plastic vigor in expressing individual traits point strongly toward Carriello as the probable author. The daring of the artist to present his king as a good-natured but uncouth character, resembling more a Dutch sailor than a high potentate, apparently did not meet the approval of the court. After three years this portrait was replaced with another anonymous portrait (fig. 91), which had already been in use since 1851 on two larger denominations, the silver piastres and the copper 10-tari pieces.

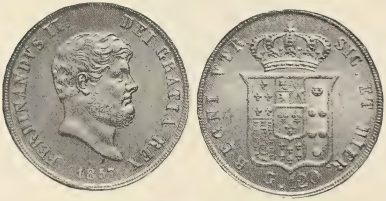

Fig. 91.—Naples, Ferdinand II, piastra, 1857 [220]
(Div. of Numismatics photo)

This design, the last portrait of the king, is distinctively different from all the previous ones. The treatment of the beard, in wavy instead of curly lines, and the severe expression of the aging monarch can be traced only to a single medal of 1855, signed by De Cecli (fig. 92). Whether in fact De Cecli can be considered as the author of this new version or whether De Cecli's medal was only a copy of a portrait created by another artist we cannot establish, since De Cecli appears otherwise to be completely unknown. Cosentini mentions scores of engravers for 1861 but De Cecli's name is not among them.[221]

Another artist who enjoyed a high reputation at the court was Luigi Arnaud.[222] Born in Naples in 1817, he was the son of engraver Achille Arnaud. Luigi had his first art training in his father's shop, which he soon took over, while still a very young man, at his father's death. In 1845 he was given the opportunity to engrave a medal commemorating the visit of Tsar Nicholas I to Naples.[223] He followed it the next year by another, large, showy medal, this time for the opening of the Caserta railroad (fig. 95).

The stately but otherwise lifeless portrait of the king used on both medals gained him the esteem of the royal court and, after a brief interim at Rome, where he had gone to study cameo engraving, he was appointed second engraver of obverses in 1847. Ap-

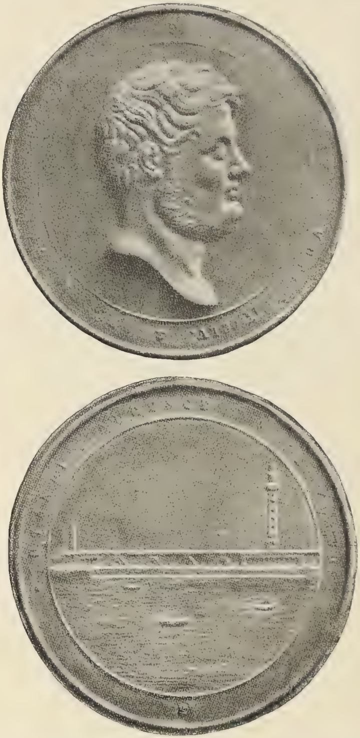

Fig. 92.—Naples, Ferdinand II, medal commemorating the new harbor of Bari, 1855 [224]
(Photo from Ricciardi)

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[220] Cagiati, fasc. 5, coin 36; D'Incerti, *RIN* (1959), p. 128, coin 200; Davenport, *European Crowns*, coin 175.

[221] Cosentini, *CagS* (1914), pp. 23–25. Repeated in Borelli, *NumR* (1936), vol. 2, p. 107.

[222] For details, see: Siciliano, *Medaglie Napoletane*, p. 3; Borelli, *NumR* (1940), vol. 6, p. 86.

[223] Ricciardi, medal 180.

[224] Ibid., medal 214.

parently he had great creative capacity; numerous obverses and reverses of medals were signed by him during the period between 1845 and 1861.

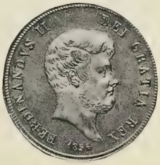

Fig. 93.—Naples, Ferdinand II, obverse of half piastra, 1856[225]
(Div. of Numismatics photo)

His first portrait of Ferdinand II (fig. 93), correct, conventional, and cold, was used as a permanent type for the 15 ducats from 1848 to the end of that issue in 1856. The same head was also used on the half-piastras struck between 1846 and 1859, and on the 5-tornesi pieces between 1845 and 1859. Another, later portrait (fig. 94), used only on medals,[226] possesses excellent workmanship. The massive and energetic features, to which a Neronian resemblance again cannot be denied, are impressive in their cold disdain. It is an interesting appreciation of the character of this monarch in the last years of his life.

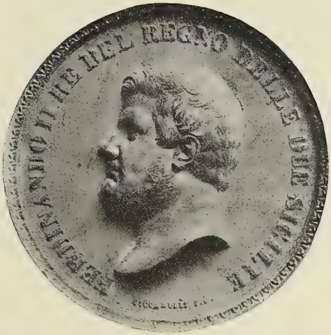

Fig. 94.—Naples, Ferdinand II, obverse of medal, 1855[227]
(Photo from Ricciardi)

A similar, neat, but at the same time, dispassionate style can be seen also in his reverse compositions. Engraved after designs created chiefly by his uncle Tommaso Arnaud,[228] these reverses reveal Luigi's sculptural abilities in efficiently treating complex compositions while maintaining a harmonious rhythm (fig. 95). His remarkable talents as a sculptor, per-

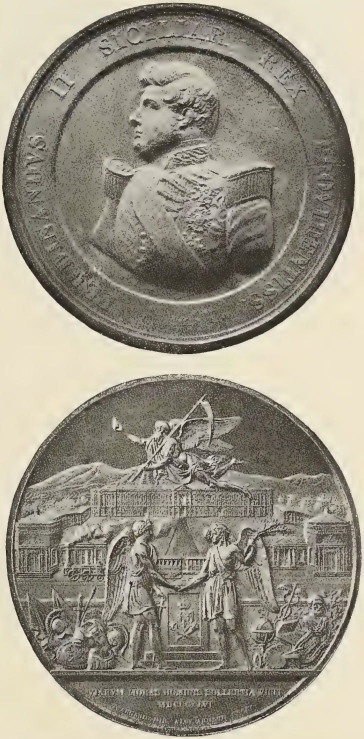

Fig. 95.—Naples, Ferdinand II, medal, 1846, by Arnaud[229]
(Photo from Ricciardi)

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[225] Cagiati, fasc. 5, coin 4; D'Incerti, *RIN* (1959), p. 110, coin 140.

[226] Ricciardi, medals 200, 213. Another fine creation is the medal dedicated to Pius IX during his exile in Gaeta, 1848—cf. Siciliano, *BCNN* (1939), pp. 47–53.

[227] Ricciardi, medal 213.

[228] He directed the Office of Engraving after Catenacci's death.

[229] Ricciardi, medal 181.

fected through an excellent education, increased his reputation at court, and in 1855 Ferdinand II paid him, as a mark of recognition, the significant sum of 600 ducats for the engraving of a medal.[230]

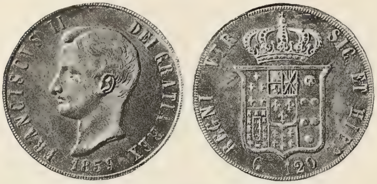

Fig. 96.—Naples, Francis II, piastra, 1859 [231]
(Div. of Numismatics photo)

It was only natural that with the accession of Francis II in 1859 Arnaud should be commissioned to engrave the new king's coinage (fig. 96). This final piece in the long series of Neapolitan coins won wide approval at court for its "great resemblance." The king appointed him director of the Engraving Office with the right to place his initials on all coin dies. The piastra of 1859, bearing the elegant but disillusioned features of the young king, is the swan song of the independent Neapolitan mint.

The encroaching waves of the unification movement borne by Garibaldi's men, soon reached these southern lands and in 1861 the Kingdom of Naples and Sicily was incorporated into the new Kingdom of Italy. The mint at Naples, however, continued to work—but now for the whole country. Names like Andrea Carriello, Scipione Catenacci, and especially Luigi Arnaud were well known [232] in the early sixties, when coins bearing the portrait of Victor Emmanuel II were struck at this mint. The sole indication of their origin was a small letter n.

ROME SINCE 1861

It seems an irony of history that periods of high achievement in the evolution of nations seldom find superior artists among coin engravers to perpetuate the greatness of their time. A classic example is Caesar's coinage. Without any doubt it can be classed among the weakest portrait series of the entire ancient Roman coinage, otherwise so outstanding for its forceful realistic portraiture.

This same phenomenon occurred during the fateful years of Italy's battle for national unity. Under the leadership of the Savoy king, Victor Emmanuel II, Italians from separate territories set out to overthrow their national foreign rulers and join the movement for freedom and unity. The numerous coins of Victor Emmanuel II struck during the long reign of 29 years, however, do not show his appealing majesty.[233] This is evident in the many coins struck during the first part of his reign, as king of Sardinia (1849-1861), by the chief engraver of the Turin mint, Giuseppe Ferraris, who continued also to engrave the coins for the unified kingdom (fig. 97). The complete coinage in gold, silver, and copper struck during the long span of almost three decades is bound by a rigid conventionalism. The head of the king, banal in concept, hardly conveys his warm, charming, and energetic personality. The coat of arms on the reverse does not represent an inspiring symbol of national faith but a cold image of officialdom. Mario Lanfranco in his study of the projects and patterns of the Italian kingdom [235] deplores the lack of artistic

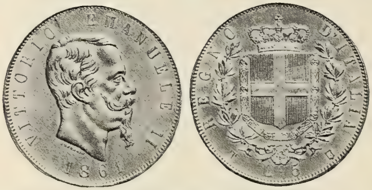

Fig. 97.—Italy, Victor Emmanuel II, 5 lire, 1861, Turin mint [234]
(Div. of Numismatics photo)

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[230] Cosentini, *CagS* (1914), vol. 4, no. 2, pp. 37–42.

[231] Cagiati, fasc. 5, coin 1; D'Incerti, *RIN* (1959), p. 169, coin 433; Davenport, *European Crowns*, coin 176.

[232] Cosentini, *CagS* (1914), vol. 4, no. 1, pp. 19–26.

[233] For a comparative study of Victor Emmanuel II's portraits on medals, see Mondini, *Spigolando tra medaglie e date.* On pp. 143, 149, 190, 347, and 449 are medals engraved by B. Wyon, R. Gayard, L. Gori, and Paolo Pasinati.

[234] *CNI*, vol. 1, p. 465, coin 3; Pagani, *Monete italiane*, coin 793; Davenport, *European Crowns*, coin 140.

[235] Lanfranco, *RasN* (1930), p. 209. Carboneri (p. 263) seems less displeased with Ferraris' creations: "Le monete del Ferraris sono ancora più simplici di quelle del Lavy, ma sono riputate generalmente ottime per la esecuzione."

inspiration and the mediocre level of Victor Emmanuel's coinage.

The engraver Giuseppe Ferraris[236] was born in 1794 in Turin, the son of an employee of the Austrian embassy. His family later moved to Milan, where the young Giuseppe had the opportunity to work as an apprentice in Luigi Manfredini's shop. At the same time he studied at the Scuola di Belle Arti of the Brera Academy in Milan. A copy of Andrea Appiani's "Olymp" established his reputation and in 1828 he began working as engraver at the Turin mint. The dies for the 25 centesimi of Charles Felix of Sardinia were his first work for his employer, whom he served for the rest of his life until his death in 1869. During the reign of Charles Albert he was given the job of chief engraver, a position which he held also during the reign of Victor Emmanuel II.

Although the coinage for the unified kingdom was created when he was 67 years old, it is definitely superior to the previous series (fig. 98). The more compact relief of the smaller head, surrounded by a well-distributed inscription, creates a balanced coin image, which confers on this late portrait artistic qualities that were completely absent from his earlier coins.

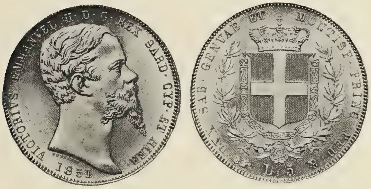
EMMANUEL II D. G. REX SARD. CYP. ET HIER.
VICTORIA
1851
SAB. GENVAE ET MONTISF. PRINC.
L. 5

Fig. 98.—Sardinia, Victor Emmanuel II, 5 lire, 1851, Turin mint[237]
(Div. of Numismatics photo)

Ferraris displays a better feeling for plasticity and a deeper psychological approach in some of his medals commemorating contemporary events, such as the "opening of the Subalpine Parliament in 1848," or portrait medals of Victor Emmanuel II and of Camillo Cavour. Apparently these works met the king's approval and helped establish Ferraris' reputation. He was decorated with the order of SS. Maurice and Lazarus.

His successor at the Roman mint was Filippo Speranza.[238] Born in 1839 in San Marino del Cimino, Filippo came to Rome as a boy. In 1863 he entered the papal mint as an apprentice, where he worked under the direction of Bonfiglio Zaccagnini, Francesco Bianchi, and Carl Voigt. Six years later he became an engraver. His first works were the dies for the 2½ lire of 1867 and the Pope Pius IX award medal for services during epidemics. His signature can also be seen on a medal of 1869 for the papal mint. A year later, after the annexation of Rome to the Italian Kingdom, he joined the staff of the royal mint at Rome in the position of chief engraver (1870–1903).

His coins, considered by Comandini "the expression of a conventional official taste,"[239] cover the period of almost 25 years from 1878 to 1901. In his position as chief engraver he created all of the gold, silver, and copper coins struck during the entire reign of Humbert I and also during the first years of the rule of Victor Emmanuel III. Lanfranco expresses a deep sympathy for the adverse conditions under which Speranza had to work at the mint in a studio devoid of any modern technical facilities. He was forced to cut his dies directly into steel without the help of a pantograph. "This modest artist has never been sustained, guided or encouraged by his directors, who rather have sometimes hindered his work."[240] Speranza was a capable technician, yet never has the purely utilitarian character of a coin predominated more over esthetic considerations than in his work.

The gold and silver coinage, which without exception adopted the portrait of the ruler as the leading type, was an ill-chosen field for Speranza's activities, since portraiture[241] constituted the weakest aspect of his artistic creations. The portrait of Humbert I

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[236] *BDM*, vol. 2, p. 88, and vol. 7, p. 298; Thieme and Becker, vol. 11, p. 462.

[237] *CNI*, vol. 1, p. 461, coin 15; Pagani, *Monete italiane*, coin 681; Spaziani-Testa, *Casa Savoia*, coin 157; Davenport, *European Crowns*, coin 137.

[238] *BDM*, vol. 5, pp. 597–599; Thieme and Becker, vol. 31, p. 360.

[239] Comandini, *RIN* (1903), p. 477.

[240] Lanfranco, *RasN* (1931), pp. 50 ff.

[241] Among his better works can be listed a medal struck for the unveiling of the Garibaldi Monument in Leghorn, 1889—see Comandini, *RIN* (1890), p. 275.

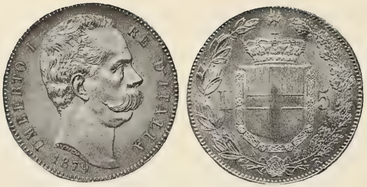

Fig. 99.—Italy, Humbert I, 5 lire, 1879 [242]
(Div. of Numismatics photo)

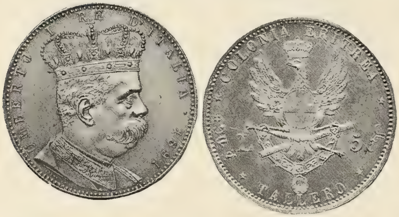

Fig. 100.—Eritrea, Humbert I, 5 lire or tallero, 1891 [243]
(Div. of Numismatics photo)

(fig. 99), with its conventional rigidity, is a regression in comparison even to Ferraris' last works.

Speranza also had the assignment to prepare the coinage for the colony of Eritrea. Interestingly, the tallero of 1891 (fig. 100) and the smaller denominations present better portrait qualities than his Italian coinage. The bust of Humbert I, in uniform and wearing a huge crown, apparently was intended to confer increased dignity and majesty to the figure of the king among his subjects in Africa.

In 1898 Speranza created, with the 5 lire for the Republic of San Marino, probably his most remarkable coin die (fig. 101). The subtle engraving harmonizes pleasantly with a well-balanced composition, permeated with patriarchal dignity. The free-standing figure of St. Martin on the obverse, surrounded by an unobtrusive, well-designed, and well-distributed legend, accentuates the vertical arrangement of the composition. The reverse, although overdesigned and filled to excess in contrast to the simplicity of the obverse, nevertheless creates a pleasant impression.

In 1900 Speranza personally supervised taking a photographic portrait of the new king in Naples. The likeness he created, however, of Victor Emmanuel III on the 5 lire 1901 (fig. 102) and the 100 lire 1903 is a pathetic example of his incapability as a portraitist. The head, wooden and lifeless in expression, sits awkwardly on a small, short neck, while an oversized drawing of the emblematic eagle [244] on the reverse, with exaggerated wing feathers, only accentuates the negative impression of the obverse.

The elderly artist did not realize that his poor creations were in fact a personal offense to the king. Victor Emmanuel III, himself a coin collector, went far beyond the role of a connoisseur. With the twenty huge volumes of his *Corpus nummorum Italicorum*, published between 1910 and 1940, he gave brilliant

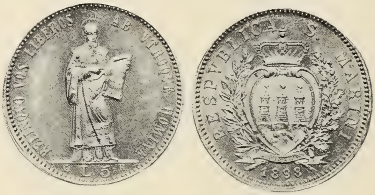

Fig. 101.—San Marino, 5 lire, 1898 [245]
(Div. of Numismatics photo)

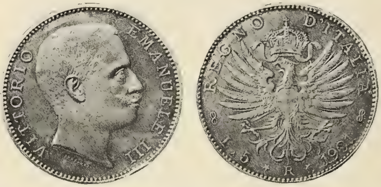

Fig. 102.—Italy, Victor Emmanuel III, 5 lire, 1901 [246]
(Photo courtesy American Numismatic Society)

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[242] *CNI*, vol. 1, p. 480, coin 3; Pagani, *Monete italiane*, coin 903; Carboneri, pp. 348, 541–542.

[243] *CNI*, vol. 1, p. 486, coin 66; Pagani, *Monete italiane*, coin 943; Spaziani-Testa, *Casa Savoia*, coin 206.

[244] The resemblance to the German eagle especially caused criticism (Lanfranco, *RasN*, 1931, p. 49). See also D'Incerti, *RIN* (1956), vol. 4, p. 111.

[245] *CNI*, vol. 10, p. 727, coin 11; Pagani, *Monete italiane*, coin 1472; Davenport, *European Crowns*, coin 302.

[246] *CNI*, vol. 1, p. 488, coin 1; Pagani, *Monete italiane*, coin 1019; Spaziani-Testa, *Casa Savoia*, coin 208; Carboneri, pp. 418–419; Davenport, *European Crowns*, 142.

evidence of his scholarly training.[247] Naturally he could acknowledge only painfully the inferior quality of his coinage. The Italian public, aware of the complete failure in the artistic conception of their coinage, expressed not only criticism, but showed interest in bringing about a change. A private enterprise, the Johnson Establishment for Medals in Milan,[248] must be credited with initiating and directing a real movement for the "artistic renewal of Italian coinage" in the years preceding World War I. A contest held in 1901 under the auspices of the Società Italiana per l'Arte Pubblica of Florence had the purpose of promoting new creations for Italian coinage. Two artists, Domenico Trentacoste and Egidio Boninsegna, distinguished themselves with their projects. The Johnson Establishment in its studios executed patterns of these projects in gold, silver, and copper.

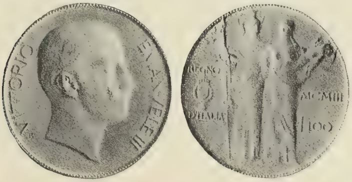

Fig. 103.—Italy, Victor Emmanuel III, pattern 100 lire, 1903 [249]
(Photo from Pagani)

Influenced by the criticism directed against Speranza's poor version of the emblematic eagle (fig. 100), Boninsegna resorted to allegoric representations such as Minerva and Agriculture for reverse types (fig. 103). Artistically insignificant, his first experiments, made in an extremely low relief, were conceived apparently with the intention of creating a coin technically easy to be struck.[250]

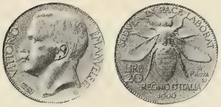

Fig. 104.—Italy, Victor Emmanuel III, pattern 20 lire, 1906 [255]
(Author's photo)

In 1905, under the direction of the Secretary of the Treasury Luzzatti, a permanent commission, the *Reale Commissione Tecnico-Artistico-Monetaria*, was assigned to supervise the selection of new coin types.[251] A contest held the same year produced only meager results. No outstanding artists participated. As a result, in 1906 the *Reale Commissione* decided to directly appoint four renowned artists to the task of creating new coin types: Egidio Boninsegna for the gold, Davide Calandra for the silver, Pietro Canonica [252] for the copper, and Leonardo Bistolfi [253] for the nickel coinage. In December 1906 Boninsegna presented his new projects.[254] Technically and artistically they were much better executed than his previous experiments. The pattern for the 20 lire (fig. 104) can be considered among his best. While the other artists encountered only limited criticism from the commission—their new silver, nickel and bronze coinage was approved in 1908—Boninsegna instead had to submit to several changes of his projects before he could obtain official approval for the finished models of the gold 10-, 20-, 50-, and 100-lire pieces in May 1910 (fig. 105). The tradition of Ferraris and Speranza had been forgotten. A refreshing, vigorous spirit bespoke a new mentality with a wide outlook. The portrait bust of Victor Emmanuel III (fig. 105) ranks among the king's best likenesses. The artist represented the sovereign as his people always knew him—in uniform. The sober, dignified features reveal a subtle portraitist. The reverse allegory of Italia with the plow, *l'Aratrice*, is a pleasant innovation. Far from perfect, with slight defects in the modeling of the arm and the unnaturally twisted leg, this otherwise harmonious composition is a blend of poetry and realism.

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[247] See: Victor Emmanuel III, *RasN* (1931), no. 6–7, pp. 185–186; F.L., *RasN* (1931), pp. 203–212; Patrignani, *RasN* (1931), no. 6–7, pp. 217–225. This issue of *RasN* was dedicated to the 50th anniversary of Victor Emmanuel III as a coin collector. See also Patrignani, *NumR* (1947), pp. 100–104.

[248] *Stabilimento per Medaglie*, under the direction of Stefano Carlo Johnson, who also published the *Rassegna annuale, medaglie–plachette–fusioni*, a review of medallistic achievements in Italy. In addition, he published in 1914 a profusely illustrated book, *La conquista della Lybia nelle medaglie*, and, in 1919, *Le rivendicazioni italiane del Trentino e della Venezia Giulia nelle medaglie*.

[249] *CNI*, vol. 1, p. 493, coin 3; Pagani, *Prove e progetti*, coin 138.

[250] *CNI*, vol. 1, p. 495, coin 16. See also Pagani, *Prove e progetti*, coins 172–173, 214–215, 316.

[251] See also: Gnecchi, *RIN* (1911), pp. 351–366; Carboneri, pp. 433–441; D'Incerti, *RIN* (1956), vol. 4, pp. 111–123.

[252] For his projects, see: *CNI*, vol. 1, p. 496, coins 21–22, p. 499, coins 39–42; Pagani, *Prove e progetti*, coins 317–321, 323, 358, 381, 386–389.

[253] For his coin projects, see: *CNI*, vol. 1, p. 498, coins 32–35; Pagani, *Prove e progetti*, coins 295–299, 305; Carboneri, p. 549. For his medals, see Nicodemi, *RIN* (1941), p. 143. Bistolfi was also known for his paintings (Comanducci, *Dizionario*, vol. 1, p. 73).

[254] Lanfranco, *RasN* (1931), p. 239, pl. 7; *CNI*, vol. 1, pp. 495–500; Pagani, *Prove e progetti*, coins 140–144, 148, 166–167, 174–175, 180; Comandini, *Rassegna annuale, medaglie–plachette–fusioni* (1910), pp. 1–5.

[255] *CNI*, vol. 1, p. 496, coin 23 [wrongly listed under projects of Canonica]; Pagani, *Prove e progetti*, coin 175.

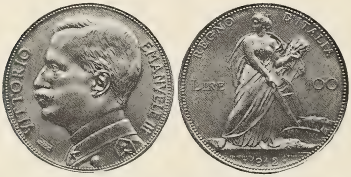

Fig. 105.—Italy, Victor Emmanuel III, 100 lire, 1912[256] (Author's photo)

Its sculptor and engraver, Egidio Boninsegna,[257] who was educated in Rome (where in 1896 he won the first prize at the Academy) worked chiefly for Johnson's medallic establishment. In addition to many sculptures and funeral monuments, he also created good portrait medals, such as the ones of Pope Leo XIII and of the numismatist S. Ambrosoli.

Among Boninsegna's contemporaries was one of the originators of the new movement—the sculptor, engraver, and painter Domenico Trentacoste.[258] Born in 1859 in Palermo, he studied art in Italy and abroad. In 1880 he went to Paris, where he opened his own studio two years later. In 1891 London became his next residence, but in a few years he established his home finally in Florence. Trentacoste participated successfully in 1894 at the International Exhibit in Vienna and in 1895 at the *Biennale* of Venice. In later years he filled the post of director at the Academy of Art in Florence. Practically blind during the last years of his life, he died in Florence in 1933.

This sculptor was commissioned to design the models for the jubilee coinage of 1911, commemorating the 50th anniversary of the founding of the Italian Kingdom.[259] The two types, the bare head of the king facing left and the allegoric group of Italia and Roma, were adopted for the gold 50 lire and the silver 5 lire (fig. 106). Surprisingly, the two compositions do not reveal the sculptor: the reliefs of both obverse and reverse are flat and insignificant. While the head of the king is reminiscent of Speranza's portrait of 1901 (fig. 102), the reverse allegory betrays a strong French influence in the style of Roty and Chaplain. The meaningless emphasis on an allegoric group, popular with medals of that period, renders this reverse weighty and inappropriate for coins. Undoubtedly the composition, called "Italia Marinara," has a certain sculptural value, but reduced to the minute diameter of a coin, it results in an unclear and cluttered design. Details with symbolic meaning have become a puzzling map-design in the background.

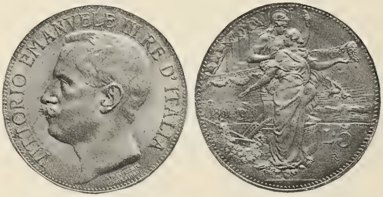

Fig. 106.—Italy, Victor Emmanuel III, 5 lire, 1911[260] (Div. of Numismatics photo)

Jean Babelon suggests the prerequisites of allegory: "A symbol is a reminder or a suggestion; it is not a complete description. The evocative force of a well-chosen detail surpasses that of a whole scene, meticulously narrated. . . . This intellectual subtlety, required from the artist as well as from his public, is the noble title of the art which we study here."[261]

Fondness for heroic figures seems to characterize the period immediately preceding World War I. Undoubtedly Davide Calandra's attempt to express national grandeur found dignified expression in the

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[256] Pagani, *Monete italiane*, coin 954; Carboneri, pp. 511–512; D'Incerti, *RIN* (1956), vol. 4, p. 121.

[257] Thieme and Becker, vol. 4, p. 300; Vollmer, vol. 1, p. 262. For some of his medals, see: Nataletti and Pagani, p. 58; *Delle medaglie e plachette*, pls. 6, 8, 18, 21.

[258] *BDM*, vol. 6, p. 132, and vol. 8, p. 238; Thieme and Becker, vol. 33, p. 377.

[259] Pagani, *Prove e progetti*, coins 168, 218, 239; Gnecchi, *RIN* (1911), p. 364; Carboneri, pp. 440–441, 515.

[260] Pagani, *Monete italiane*, coin 1020; Spaziani-Testa, *Casa Savoia*, coin 209; Davenport, *European Crowns*, coin 143.

[261] *La médaille et les médailleurs*, p. 223.

5-lire piece of 1914 (fig. 107). Commissioned in 1906 to create a new design for the Italian silver coinage, Calandra produced his model by the end of the same year. But the many changes [263] required by the Monetary Commission altered the initial project almost beyond recognition. Only the basic conception of the coin remained: a small bust of the sovereign in uniform, enclosed by the massive circle of an inscription for the obverse, and the figure of Italia on a triumphal quadriga for the reverse. Artistically insignificant, the first project (fig. 108) presented many defects: an unappealing portrait of the king crowded into a large circle of letters and, on the reverse, a poorly designed quadriga with a cumbersome group of horses. The criticism of the Commission induced the artist to correct defects and to improve the artistic qualities of the whole design. Eventually Calandra proved himself a master of plastic relief [265] and created a dignified coin image. The portrait of the king, wearing the Collar of the Annunziata Order (fig. 107), displays high qualities enhanced by a harmonious arrangement of the coin field. The reverse, deliberately emphatic, nevertheless shows a remarkable restraint in the choice of its means of expression. The static majesty of the figure of Italy contrasted with the dashing movement of the horses creates a strong impression. The subtle and, at the same time, bold treatment of the plastic surface decisively confirms Calandra's talent.[266]

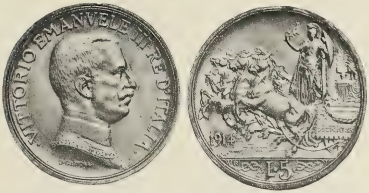

Fig. 107.—ITALY, VICTOR EMMANUEL III, 5 lire, 1914 [262]
(Div. of Numismatics photo)

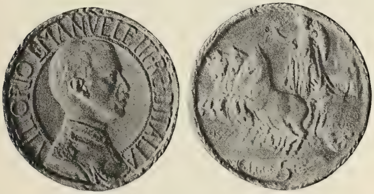

Fig. 108.—ITALY, VICTOR EMMANUEL III, pattern 5 lire, 1906 [264]
(Photo from Pagani)

The dies for the striking of the 5-lire pieces of 1911 and 1914 created by Trentacoste, and for the 100 and 50 lire by Boninsegna, were prepared by Luigi Raffaele Giorgi.[267] Born in 1848 in Lucca, he was orphaned at an early age and forced to provide for himself by working in the shop of a goldsmith. At the same time he studied at the Istituto di Belle Arti in Lucca. Later he went to Florence to specialize in the art of medal engraving. Many medals like the ones of Torquato Tasso, Vincenzo Bellini, Alessandro Volta, Guiseppe Garibaldi, and other famous Italians were produced by Giorgi during his stay in Florence.[268] A capable goldsmith and engraver, he participated in and won the contest at the Roman mint in 1906, and was appointed engraver and subsequently chief engraver. He died in Rome in 1912.

An excellent technician, he is given credit for refining the execution of Italian coinage during the first decade of this century. Endless trials were involved in establishing a process to eliminate the imperfections which resulted from mechanical reduction of a model into the steel die.[269]

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[262] PAGANI, *Monete italiane*, coin 1021; SPAZIANI-TESTA, *Casa Savoia*, coin 210; DAVENPORT, *European Crowns*, coin 144. See also CARBONERI, pp. 542–543.

[263] LANFRANCO, *RasN* (1931), p. 243; CARBONERI, p. 442; PAGANI, *Prove e progetti*, coins 219, 240, 254–257.

[264] LANFRANCO, *RasN* (1931), p. 239, coin 9; PAGANI, *Prove e progetti*, coin 217.

[265] Davide Calandra had his art education at the Accademia Albertina in Turin. Active as a sculptor, he created many generally appreciated works such as the equestrian statue of the Duke of Aosta in Turin (1902), reliefs for the Roman Parliament, and the gigantic Monument to Victor Emmanuel II in Rome. His sculpture *l'Aratro* (The Plough), 1891, is in the National Gallery of Modern Art in Rome. He was highly praised for his refined, sober style and his sensitive interpretation of emotions—THIEME and BECKER, vol. 5, p. 371.

[266] FORRER in criticizing the quadriga (*BDM*, vol. 7, p. 145) must have been greatly influenced by the reports of the Monetary Commission on the first, uncorrected project.

[267] *BDM*, vol. 2, p. 268, and vol. 7, p. 365; THIEME and BECKER, vol. 14, p. 82.

[268] For his Verdi medal, see NATALETTI and PAGANI, p. 35. Other medals of Humbert I, Mazzini, and Amedeo of Savoia are in COMANDINI, *RIN* (1889), p. 55; (1890), p. 227; (1892), p. 221.

Giorgi's original work, the dies prepared for the coinage of Italian Somaliland, have little, if any artistic value. He created these coins merely for a practical medium of exchange, imitating Trentacoste in the execution of Victor Emmanuel's portrait. Giorgi tried to interpret in his own way the recommendation of the Monetary Commission in 1905 that "the coin, in contrast to the products of other arts, represents by its nature . . . a tangible record of the degree of perfection in a nation's art."[270] Giorgi sought fulfillment of esthetic criteria purely in technical perfection.

His successor at the mint was Attilio Motti,[271] who held the position of engraver and chief engraver for 22 years until his death at age 68 in 1935. Motti continued Giorgi's tradition of technical perfection. All of the coins struck at the Roman mint for the Italian government and for foreign states during the period from 1913 to 1935 are faultless examples of his technical skill as well as his understanding of the artistic problems involved in adapting a project to a coin. Often he had to encounter the difficult task of reconciling new and bold ideas of various artists with the technical limitations of coin engraving. The dies cut by Motti from models presented by Calandra, Romagnoli, or Mistruzzi, nevertheless, reproduced faithfully the individual characteristics of each artist.

The 5 lire of 1914 designed by Calandra (fig. 107), the 20 lire of 1927 (fig. 112), and the 20 lire of 1928 (fig. 126) created by Romagnoli were magnificiently translated into steel dies by Motti. Each of the three coins presents a new treatment of surface and edge. The 5 lire 1914 has a wide, protective rim which encloses the massive coin, while the 20-lire piece of 1927 is conceived differently: the planchet is not as thick and the whole appearance of the coin is less compact; in order to protect the well-rounded relief, a beaded and slightly raised border encloses the coin field. Even more basically different is the 20 lire 1928 (fig. 126). This new and daring creation of Romagnoli fills the limited coin field to capacity. The impression of forceful expansion is maintained by Motti through a very ingenious technique which practically eliminates the border: only a sharp, raised edge contains the impressive coin image.

The same technique was used by Motti for striking the gold 100 and 20 lire 1923 with fasces. These coins are his own artistic products (fig. 109). The portrait of the king, although impeccable in its plastic treatment, shows little spiritual life. Impassive in its expression, it reveals the inability of the artist to reach beyond physiognomic likeness. The large-sized letters of the inscription overcrowd the field, depriving the coin of any esthetic appeal.

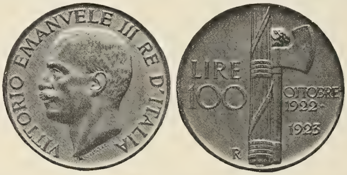

Fig. 109.—Italy, Victor Emmanuel III, 100 lire, 1923[272]
(Author's photo)

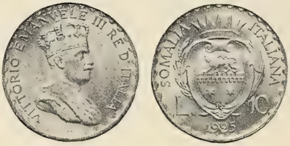

Fig. 110.—Italian Somaliland, Victor Emmanuel III, 10 lire, 1925[273]
(Div. of Numismatics photo)

The reverse types of the 100- and 20-lire pieces of 1923 (fig. 109) present a novel emblem in Italian gold coinage. The simplicity of the Roman fasces and the lictorian ax would have been more impressive if not disrupted by the bold inscription.

The same tendency to use oversize lettering to indicate the denomination is characteristic of Motti. Apparently he believed that the indication of value must stand out forcefully on a coin. The 5- and 10-lire issue of 1925 for Italian Somaliland (fig. 110) supports this assumption.

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[269] The only reliable information available about the otherwise unknown and complicated backstage operations involved in the planning, preparing, and striking of coins, and about the activity of persons involved in this process, is in the series of articles written by Mario Lanfranco, the former director of the Roman mint. See under Lanfranco in literature cited.

[270] Lanfranco, *RasN* (1931), p. 237.

[271] *BDM*, vol. 8, p. 84.

[272] Pagani, *Monete italiane*, coin 957; D'incerti, *RIN* (1956), p. 128.

[273] Pagani, *Monete italiane*, coin 1302.

Motti's activity as an engraver confines many of his better creations to the field of portrait, prize, and commemorative medals.[274] They all portray a good technician who tried to compensate for his mediocrity of conception with a skillful and neat treatment of the plastic surface. His portraits[275] are sincere, unsophisticated products of limited psychological insight and a surprising lack of individuality. Motti's creative drive was not strong enough to mold an individual style, as can be seen in a 2-lire pattern of 1922 (fig. 111). A first-rate diesinker, he cannot be compared as an engraver to his contemporaries Mistruzzi and Romagnoli.

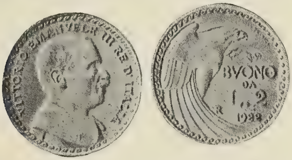
Fig. 111.—Italy, Victor Emmanuel III, pattern 2 lire, 1922[276]
(Photo from Pagani)

Attilio Motti stands at the threshold of a new era in Italian coin engraving, when the cold, official heraldry of coin images turn toward more inspiring symbols of national greatness. During the latter half of the 19th century, the coin, impersonal and stereotyped down to the very portrait of the ruler, ceased to be an expression of anything that involved the spirit of the nation, its art, or its national aspirations. Only gradually, under the guidance of enlightened private initiative and the inspiration of the personality of Victor Emmanuel III, the *re numismatico*, did a reform movement succeed in asserting the imperative of drastic change.

Giuseppe Romagnoli, Aurelio Mistruzzi, Pietro Giampaoli belong to the generation of modern Italian engravers who brought about this change to a more functional esthetic of the coin.

Giuseppe Romagnoli,[277] born in 1872 in Bologna, studied sculpture and engraving with Enrico Barbieri. In 1909 he became the director of *Scuola dell'Arte della Medaglia*.[278] Well known as a sculptor, he participated in many international exhibitions in Paris, Brussels, and in Munich, where he was awarded the gold medal. His work *Ex Natura Ars* won the Venice prize in 1897. *Giovinezza* (Youth), another sculpture, is in Rome in the Museum of Modern Art. He is also the creator of sculptural groups which adorn the Victor Emmanuel Bridge and the Victor Emmanuel Monument in Rome. In 1911 he won the international competition for the great monument of the International Telegraphic Union in Bern, Switzerland, a work which was erected in 1922.

Romagnoli is the official representative of modern Italian coin engraving, while Aurelio Mistruzzi represents the papal art of coin engraving during the same period. Contemporaries, working in close relationship at the Roman mint, where coins and medals are struck for both the Italian and the Vatican governments,[279] the creations of these men evolve in similar directions, although differentiated by distinct personalities. Romagnoli is the author of 53 of Italy's modern coin types and also of an impressive series of official and private medals.

With him Italian coin engraving approached the long-cherished goal of a more artistically appealing coinage. Severely judged by Italian art critics[280] as having limited inspiration and imagination, his "shortcomings" can be explained by the fact that he often presented himself as an eclectic artist. His style fluctuates according to his source of inspiration. Moreover, he does not assimilate the spirit of an art period of the past although he yields completely to its external formalism.

Working at the height of Fascism, when ancient Rome was the official standard of civic excellence, it was natural that Romagnoli would turn for inspiration to ancient sources. His models for the Italian gold coinage[281] as well as the silver 20-lire 1927 (fig. 112) and 1936 (fig. 113), clearly reflect this tendency. The personification of *Italia* on a ship's prow (fig. 114), the striding figure of the lictor on the 100 lire 1936, and the figure of the sower on the Albanian 2-franka ari piece of 1926 (fig. 115) portray the glorification of a heroic tradition. They are powerful coin images, and considerably enhance the decorative character of Italian coinage, but the flat execution of the plastic relief detracts from their artistic qualities. The perfect workmanship of this skilled artist, accurate in the execution of details and with an unquestionable sense of proportion, still fell short of imparting Roman vigor and magnificence to the ancient clichés. This quality appears strikingly if the lictor (fig. 114) is compared to the naively designed but sincere and forceful figures of Roman lictors on a denarius engraved over 2000 years before (fig. 116).

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[274] Many of his medals are published and illustrated in *RZ*, pp. 87–89, 92–94, 97–99, 107–112.

[275] *RZ*, p. 100, coin 7; p. 101, coins 20, 30; p. 102, coin 35.

[276] Pagani, *Prove e progetti*, coin 245.

[277] *BDM*, vol. 8, p. 170; Thieme and Becker, vol. 28, p. 540; Figuras de la numismática . . . *Exposición nacional de numismática* . . . (1951), p. 153.

[278] Founded in 1909 to train young sculptors for coin engraving—Carboneri, p. 441; *RZ*, p. 1.

[279] The Monetary Convention of 1930 decreed that the Vatican could have the use of the Roman mint for the striking of coins and medals.

[280] R.S., *NumR* (1937), p. 54.

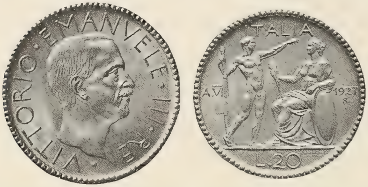

Fig. 112.—Italy, Victor Emmanuel III, 20 lire, 1927[282]
(Div. of Numismatics photo)

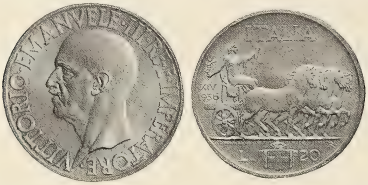

Fig. 113.—Italy, Victor Emmanuel III, 20 lire, 1936[283]
(Div. of Numismatics photo)

The triumphal quadriga on the reverse of the 20-lire 1936 (fig. 113), commemorating the Italian Empire, is practically an adaptation of a Roman type frequently used in the Augustan and Claudian periods. A similar interpretation guided Romagnoli in composing some of his medals, such as the ones commemo-

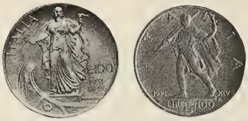

Fig. 114.—Italy, Victor Emmanuel III, reverses of 100 lire, 1931, 1936[284]
(Div. of Numismatics photo)

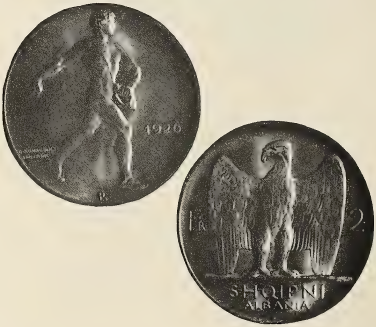

Fig. 115.—Albania, Victor Emmanuel III, 2 franka ari, 1926 (2x actual size)[285]
(Div. of Numismatics photo)

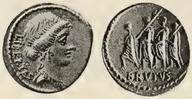

Fig. 116.—Ancient Rome, denarius of Q. Caepius Brutus, about 60 B.C.[286]
(Div. of Numismatics photo)

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[281] For the 100 and 50 lire 1931 (Fascist Era IX) to 1933 (F.E. XI), the 100 and 50 lire 1936 (F.E. XIV), and the 100 lire 1937 (F.E. XVI), see Pagani, *Monete italiane*, coins 959–964, 970–974.

[282] Pagani, *Monete italiane*, coin 985; Spaziani-Testa, *Casa Savoia*, coin 212; Davenport, *European Crowns*, coin 145.

[283] Pagani, *Monete italiane*, coin 994; Spaziani-Testa, *Casa Savoia*, coin 221; Davenport, *European Crowns*, coin 147.

[284] Pagani, *Monete italiane*, coins 959, 963.

[285] Raymond, *Coins of the World*, coin 6; Lanfranco, *RasN* (1932), pp. 258–259, pl. 5, coin 15.

[286] Sydenham, *Coinage of Roman Republic*, p, 150, coin 906.

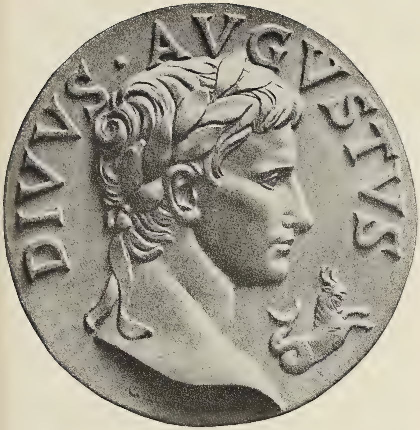

Fig. 117.—ITALY, obverse of medal commemorating the bimillenium of Augustus [1937] [287]
(Photo from *RZ*)

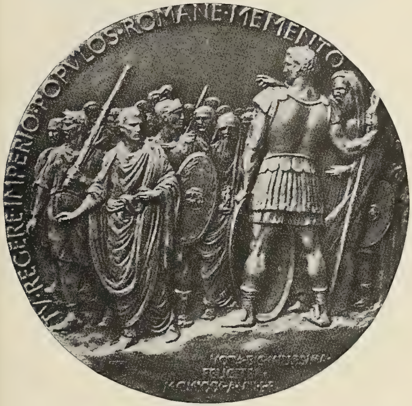

Fig. 118.—ITALY, medal commemorating the bimillenium of Virgilius, 1930 [288]
(Photo from *RZ*)

rating the bimillenium of Augustus (fig. 117) and of Virgilius. Huge in size and complex in composition, they cling closely to their ancient models. The obverse scene of the Virgilian medal (fig. 118) certainly tries to imitate similar compositions from the frieze of Trajan's Column.

In harmony with his devotion to ancient Rome, Romagnoli turned also to Greece for artistic inspiration. The frequency of nude athletic figures on his coins [289] and especially on medals reveals the great fascination which ancient Greek glyptics exerted on him. The spear-throwing youth on the medal commemorating the Olympic games in Antwerp, 1920 (fig. 119), the "Dedalus" on a medal struck in 1933 and the "Prometheus" on a medal of 1937,[291] as well as the youth with fasces on the 20-lire piece of 1927 (fig. 112), are characteristic examples of his tendency to imitate the structural perfection of ancient Greek statuary.

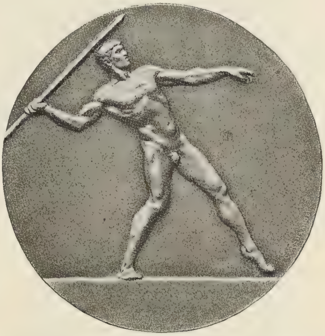

Fig. 119.—ITALY, medal, no date, commemorating the Olympic Games [290]
(Photo from *RZ*)

Confronted with the challenge of expressing eurythmic beauty in a perfectly modeled plasticity, Romagnoli solved the problem only partially. Well-synchronized movements of accurately modeled plastic forms confer to his figures of athletes a statuary beauty, but they lack vitality. The brilliance of an art concept deeply felt by ancient masters could confer beauty to their work, but it becomes meaningless to the later imitator. The modern artist could copy the academic perfection of lines and forms, but he could not absorb the ancient spirit, essentially different from the mentality of his own time.

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[287] *RZ*, p. 125, medal 66.

[288] *RZ*, p. 120, medal 51.

[289] See especially his coinage for Albania: RAYMOND, p. 8, coins 6, 16.

[290] *RZ*, p. 114, medal 8.

[291] *RZ*, p. 122, medal 58; p. 125, medal 68.

In this group the coins, compared with the medals, must be adjudged of superior quality. One reason is that the small, limited field of the coin, slightly blurred by the modern reducing process of the original model, conceals many of the imperfections which are salient on the larger field of the medal. As a result of this and of his own artistry, Romagnoli was able to create some of Italy's most impressive modern coins, among which are the 10-lire piece of 1926 (fig. 120) and the 10 lire 1936 (fig. 121). They exemplify best his exquisite technique in mastering composition and portrait alike. Victor Emmanuel's portrait by Romagnoli (fig. 121) must be considered the best likeness of this monarch. Imposing in its stately perfection, with subtle details, this head of Victor Emmanuel III, certifies the high degree of Romagnoli's skill in engraving.

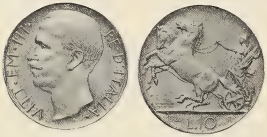
Fig. 120.—Italy, Victor Emmanuel III, 10 lire, 1926 [292]
(Div. of Numismatics photo)

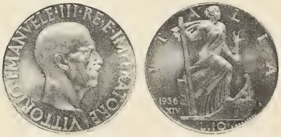
Fig. 121.—Italy, Victor Emmanuel III, 10 lire, 1936 [293]
(Div. of Numismatics photo)

The same art, permeated with sensitivity and decorative grace, can be noted in Romagnoli's coinage created for Albania under the rule of Ahmed Zog. The simple, compact, and expressive outline of Zog's portrait embellishes one of the most attractive modern coins (fig. 122). The allegories of the reverse types are chiefly modern interpretations of ancient Greek coin images: the rider on the 1-lek piece recalls the boy rider on the Tarentum coins, Hercules wrestling the Nemean lion on the half-lek is inspired by a similar type on the coins of Heraclea, while the beautiful eagle head on the 10 qindar leku is taken from the famous coins of Elis. Inspired by Greek coins, Romagnoli in 1927, using the butting bull types of coin of ancient Thurium (fig. 123), also created a project for a 20-lire piece (fig. 124), but it was not accepted.

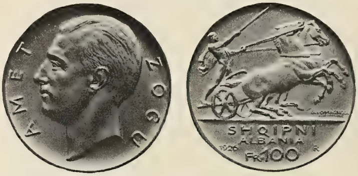
Fig. 122.—Albania, Zog I, 100 franka ari, 1926 [294]
(Author's photo)

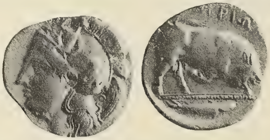
Fig. 123.—Thurium (Lucania), double stater struck 400–281 B.C.[295]
(Div. of Numismatics photo)

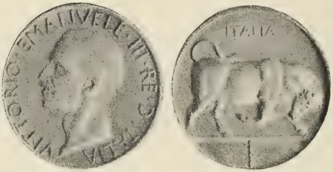
Fig. 124.—Italy, Victor Emmanuel III, pattern [20 lire, 1927] [296]
(Photo from Pagani)

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[292] Pagani, *Monete italiane*, coin 1004.

[293] Ibid., coin 1013.

[294] *RZ*, pp. 73–77; Yeoman, p. 11, coin 17.

[295] Grose, *Catalogue McClean Collection*, vol. 1, pl. 40, coin 17.

[296] Pagani, *Prove e progetti*, coin 189.

A conspectus of Romagnoli's art would be incomplete without mentioning a group of seven annual medals commemorating the years of the Fascist era.[297] His fondness for heroic figuration here found an appropriate field for expression. Inspired by ideological symbolism, he tried to glorify in these medals a spirit of national exaltation. Amazing is the metamorphosis which took place; his style changed completely: the fine, subtle sensitiveness flows into a bold and aggressive robustness. Statuesque and cold, the figures of these medals become merely symbols, and even the busts of Victor Emmanuel III (fig. 125) and of Mussolini, remarkable as they are for their excellent workmanship, seem to lose their human character. Evidence of these nationalistic tendencies may be seen in his 20-lire coin of 1928 (fig. 126), which bears the motto on the reverse: "Better to live one day as a lion than a hundred years as sheep."

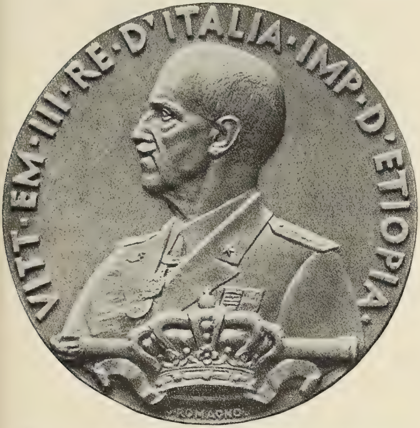

Fig. 125.—ITALY, obverse of medal commemorating the first anniversary of the Empire, year XV F.E.[298] (Photo from *RZ*)

Romagnoli is a classic example of a good artist exposed to the vicissitudes of overwhelming ideological influences, which, appealing to the versatility of his talent, split his ego and accentuated facets of his art instead of allowing him the freedom to evolve according to an interior development. Regarded in their totality, Romagnoli's creations present such manifold traits that sometimes they can hardly be attributed to the same individual.

His art did not win unanimous approval, which is probably due to a rejection of its ideological content in spite of his genuine talent. The heroic spirit of ancient times, artificially transplanted and exalted, did not stir conviction in many Italian minds. Ancient art has often been imitated, but never have traditional patterns been more boldly proclaimed as official symbols of national aspiration. As a result, Romagnoli's creations were considered by these critics to be remote, insincere, and barren. His talent and rich creative qualities fell victim to the political climate.

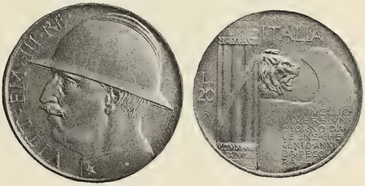

Fig. 126.—ITALY, VICTOR EMMANUEL III, 20 lire, 1928[299] (Div. of Numismatics photo)

While Romagnoli was serving the Italian government, his contemporary, Aurelio Mistruzzi[300] (d. 1960), chief engraver for the papal coinage, could claim an equally prolific output during his continuous activity at the Vatican. Born in Villaorba (Udine) in 1880, he studied in Venice and at the Brera Academy in Milan before obtaining a fellowship which permitted him to complete his studies at the School of Medallists in Rome. In this city he established his permanent residence. From 1919, during the Pontificate of Benedict XV, Aurelio Mistruzzi worked as engraver and later as chief engraver of

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[297] See illustrations, *RZ*, pp. 128–133.

[298] *RZ*, p. 132, medal 6.

[299] PAGANI, *Monete italiane*, coin 993; SPAZIANI-TESTA, *Casa Savoia*, coin 220; DAVENPORT, *European Crowns*, coin 146.

[300] VOLLMER, vol. 3, p. 401.

Vatican coins and medals,[301] serving under Popes Benedict XV, Pius XI, and Pius XII. He succeeded Francesco Bianchi, the official medal engraver of Pope Pius XI.

Mistruzzi was a versatile artist. Producing not only an impressive number of medal and coin dies, he devoted his time also to sculpture. The *Pietá* in the private chapel of the Nerazzini family in Montepulciano, the *Vergine Saggia*, a madonna for the tomb of the Moretti family in Villaorba, the *St. Francis* in the Basilica of St. Anthony in Padua, plus many chandeliers, tabernacles, and other religious objects are examples of his prodigious activity.

In his role as official engraver at the Vatican he created the dies for the complete coinage in gold, silver, nickel, and copper of Pope Pius XI, and used the same reverse types for the coinage of Pope Pius XII in 1939.

The new reform trend found its expression also in Mistruzzi's coinage. After the long hiatus in papal strikings since 1870, the coinage of Pius XI, "the Pope of Conciliation," signaled a new era, when a centuries-old tradition and art were resumed with new vigor in accord with the esthetic expectations of modern times. Mistruzzi embarked upon this task with the reserve and moderation which distinguish his whole artistic temperament. His sensitive personality was adverse to any radical changes. With the aristocratic restraint of a master, he tried to create new and, at the same time, artistically attractive symbols of an old ecclesiastic heraldry, intent on not sacrificing the dignity of the institution.

Motivated by his exquisite sense of the decorative, he created a charming group of religious figures and scenes, representing among others the Savior, the enthroned Madonna with Child, St. Peter in the boat, St. John with the Lamb, Archangel Michael, St. Peter, and St. Paul. The chief artistic value of these scenes consists in their graceful harmony. The figure of the Savior on the gold 100-lire piece of 1929 (fig. 127), impressive in its spirituality, the diaphanous figure of the Madonna on the 1-lire piece, or the Good Shepherd on the 2 lire (fig. 128) are gracious, serene compositions, cut to please the taste of the broad mass of believers, and not subtle creations reserved for the sophisticated art-lover.

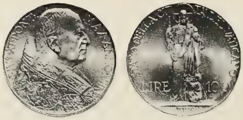

Fig. 127.—Vatican, Pius XI, 100 lire, 1929 [302]
(Div. of Numismatics photo)

The larger part of Mistruzzi's activity at the papal mint was devoted to the engraving of medals. They can be divided, according to Patrignani's groupings, into annual medals, those commemorating exceptional events, and those celebrating different personalities connected with the Vatican.[304]

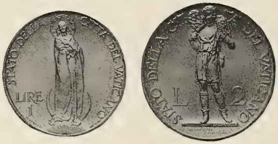

Fig. 128.—Vatican, Pius XI, obverses of 1 and 2 lire, 1929[303]
(Div. of Numismatics photo)

The annual medals issued each year during the entire pontificate of a pope usually commemorate the significant events of the preceding year.[305] Among this group the most impressive compositions are the Consistory of Cardinals before the Bernini altar in St. Peter's Basilica (engraved on the reverse of the medal of year VIII)[306] and a scene representing the Pope in prayer for world peace on the medal of year V (1943).[307] The last two decades, with their abundance of extraordinary events, inspired a great number of special medals. Among them should be mentioned the medal commemorating the Marian Year (1954),[308] the 450th anniversary of the Swiss guards,[309] and the opening of the World's Fair in Brussels.[310]

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[301] F.L., *RasN* (1931), pp. 110–112; Patrignani, *IN* (1952), vol. 3, no. 1, p. 3; *NumR* (1940), pp. 31–34; *NumR* (1948), vol. 14, pp. 30–38; Pagani, *RIN* (1949), pp. 64–65; Aes, *NumR* (1935), vol. 1, pp. 8–13.

[302] *CNI*, coin 1; Pagani, *Monete italiane*, coin 1576.

[303] *CNI*, coins 4, 5; Pagani, *Monete italiane*, coins 1603, 1612.

[304] Patrignani, *NumR* (1948), nos. 1–3, p. 30. For other medals, see also Johnson, *Le rivendicazioni italiane*.

[305] Annual medals were published in *NumR* (1935), no. 1, pp. 14–15; (1939), no. 3, p. 79; (1943–1945), pp. 77–78; (1947), nos. 1–3, p. 42; (1949), nos. 1–6, p. 73. See also most issues of *IN*.

[306] *NumR* (1947), nos. 1–3, p. 42.

[307] Published in *NumR* (1943–1945), p. 77.

The value of these medals rests chiefly in the composition of the reverse, the portrait of the pontiff on the obverse being transmitted unchanged or only slightly altered from year to year. On the personal medals, however, the likeness of the commemorated personality deserves special attention.

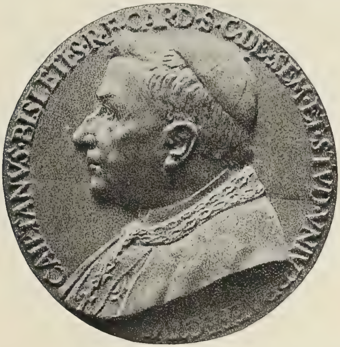

Fig. 129.—Vatican, obverse of medal of Cardinal Bisleti[311] (Photo from *IN*)

Mistruzzi proved to be a good portraitist although many of his creations do not achieve the highest quality. His analytic interpretation of human physiognomy, his unobtrusive suggestions of intellectual and emotional qualities, and his subtly modeled planes all blend in creating a clean-cut, academic portrait. Among his better portraits should be considered the busts of Popes Pius XI and Pius XII. The latter, studied minutely in the complexity of his personality and interpreted by the artist in many changed versions, emerged in a "speaking" likeness. The portrait of Gaetano Cardinal Bisleti (fig. 129), created by Mistruzzi in younger years (1924), betrays the artist's great admiration for the Renaissance, as can be seen by comparing it to a medal created about 1480 by Niccolo Fiorentino (fig. 130). Mistruzzi turned to this period for inspiration as Romagnoli turned to classical antiquity for his esthetic sources. Unified in conception, subtle in suggestion, sensitive in execution, Mistruzzi's portrait exemplified the rewarding results obtained by a deep understanding and assimilation of the esthetic concept of an earlier period. The portrait medals of Marquis Camillo Serafini, Francis Cardinal Spellman,[313] Monsignor Giulio Montini,[314] or Celso Cardinal Costantini[315] are a few examples of the great number of medals engraved by Mistruzzi during the past two decades.

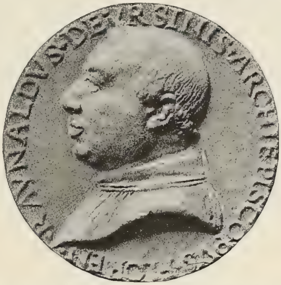

Fig. 130.—Obverse of Medal of Archbishop Rinaldo Orsini of Florence by Niccolo Fiorentino, about 1480[312] (Photo from Hill)

A large number of these medals was work done in addition to his duties at the Vatican, medals which were made for the Italian and foreign governments as well as for private persons. A survey of official Italian medals would be incomplete without mentioning the works of Mistruzzi, and his name in fact frequently appears in the medal listings of the Italian Government.[316] In each group of premium, war, portrait, and commemorative medals, a few compositions of Mistruzzi testify to his unbounded inventiveness. Interestingly, the Mistruzzi one encounters here differs greatly from the Mistruzzi one meets in the Vatican coinage, revealing an unexpected facet of his personality. The academic, subdued, somewhat pedantic style of the religious scenes changes into a daring and forceful style. Few of these compositions, such as the appealing medal of 1927 for the Fair at Tripoli,[317] recall his style of the Vatican compositions.

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[308] "Medaglia pontificia dell'anno Mariano"—*IN* (1955), no. 9.

[309] Published in *IN* (1956), no. 6.

[310] Published in *IN* (1958), no. 5.

[311] R.S., *NumR* (1937), no. 3, p. 53.

[312] Hill, *Italian Medals of the Renaissance*, pl. 152, medal 937.

[313] Published in *IN* (1950), nos. 11–12.

[314] Published in *IN* (1955), no. 10.

[315] Published in *IN* (1957), no. 1.

[316] *RZ*, pp. 89–112.

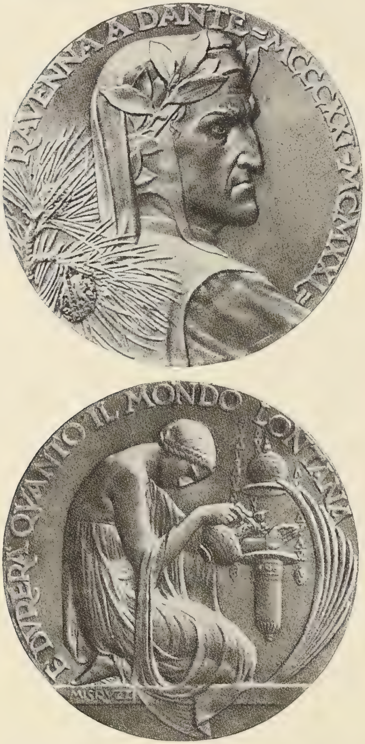
RAVENNA A DANTE MCCCXXI MCMXXI
E VEDERAI QUANTO IL MONDO CONTIENE
MISTRUZZI

Fig. 131.—Italy, medal commemorating the 6th centennial of Dante, 1921 [318]
(Photo from *RZ*)

Although a greater number of subjects implicitly calls for a greater variety in execution, this does not necessarily impair artistic qualities. Banality, the usual plague of commemorative medals, can seldom be detected in Mistruzzi's compositions. Much of the time his unquestionable technical skill or the originality of the sculptured theme, such as the one on the Dante medal in 1921 (fig. 131), confers a superior quality to his work. Apparently he does his best when, inspired by Renaissance art, he abandons the soft contour and pedantic technique of his usual style and follows the more unified and compact simplicity of those earlier masters. In 1935 he struck for the Musical Academy of St. Cecilia in Rome an official medal (fig. 132) which bears on the obverse an impressive bust of the saint. The high, massive relief as well as the compact character of the inscription—used in the Renaissance tradition as an organic part of the whole composition—does not detract from its effect. The delicate line of the head, turned slightly upward in a movement of ecstatic inspiration, is fully enhanced by the simplicity of composition.

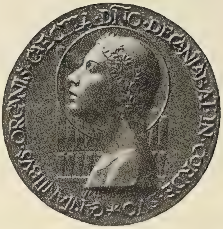

Fig. 132.—Italy, obverse of medal [no date] commemorating the Music Academy of St. Cecilia [319]
(Photo from *RZ*)

The medal of Benito Mussolini in 1925 reveals a third and even more unexpected aspect of Mistruzzi's talent. The head, vaguely inspired by Renaissance technique, reveals only moderate portrait qualities, but the truly surprising part of the medal is the

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[317] "Medaglia per la Prima Esposizione Fiera Campionaria di Tripoli"—*RZ*, p. 117.

[318] "Medaglia per il VI Centenario Dantesco"—*RZ*, p. 114, medal 10.

[319] "Medaglia ufficiale dell'Accademia di S. Cecilia"—*RZ*, p. 123, medal 62.

reverse (fig. 133). The symbolic figure of the powerful helmsman reveals the amazing vigor in expression of which Mistruzzi was capable. In order to concur with the spirit of the times he completely changed his technique, his style, and practically his entire creative ego.[321] Of Michelangelic aspect, the figure of the gigantic navigator is completely new and modern in execution. Seldom has the ideal of physical strength been more impressively represented. Romagnoli's athletes pale before this giant. The bulging, excellently modeled muscles and limbs which fill the restricted field of the medal, keeping the head to a minimum of space, succeed in presenting an image of overpowering physical strength. Moreover, the piece retains perfect balance of composition, the strong vertical line of the central figure being harmoniously enclosed within the two segments of inscription.

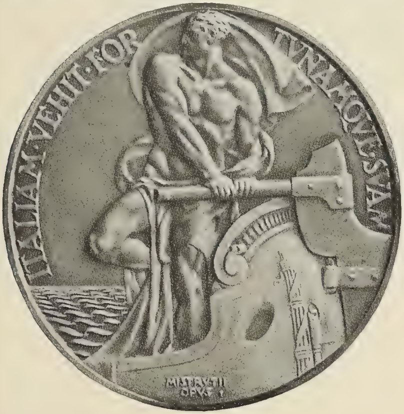

Fig. 133.—ITALY, reverse of medal commemorating Benito Mussolini, 1925 [320]
(Photo from *RZ*)

In the same line of development is the reverse of the gold 100-lire piece struck in 1925 to commemorate the 25th anniversary of Victor Emmanuel's reign (fig. 134). The official intention was to give this commemorative coin a rather medallic character.[323] The obverse, representing the head of the king resting on an oak tree, resulted in an awkward design. But the remarkable accomplishment is the reverse. A forward-striding fighter, gripping a banner with one hand and carrying a small figure of victory with the other, triumphantly ascends a rock inscribed VETTA D'ITALIA (Peak of Italy). This novel coin image has stirred controversial judgment. But apart from slight imperfections, among which might be mentioned the somewhat forced twist of the right shoulder, the coin fully deserves its great popularity among collectors. The forceful movement of the figure which cuts the field of the coin almost diagonally, counterbalanced by the solidity of the rock and the sweeping motion of the banner, confers life and vigor to an unusual composition, so different from the customary symbolic figures of ancient inspiration.

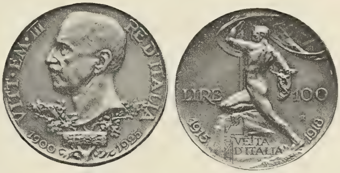

Fig. 134.—ITALY, VICTOR EMMANUEL III, 100 lire, 1925 [322]
(Div. of Numismatics photo)

To those who unduly criticized his efforts, Mistruzzi gave an answer on a self-portrait medal: "*Quod potui feci, faciant meliora potentes*" ("What I could, I did—let those who can, do better").[324]

After Attilio Motti's death the position of chief engraver at the Roman mint was given to Pietro Giampaoli.[325] Born in 1898 in Buia, Province of

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[320] *RZ*, p. 101, medal 26.

[321] A strange coincidence placed the author of one of the most inspired medals of Fascism in serious conflict with the party. PATRIGNANI, (*IN*, 1952, vol. 3, no. 1, p. 3) relates the adventure of one of Mistruzzi's anti-Fascist medals, which was created in secrecy and was almost published prematurely in a leading Roman newspaper the day of Mussolini's reappearance in September 1943. Mistruzzi's response to personal persecution had found expression toward the end of the war in four anti-Fascist and anti-Nazi medals, all filled with the satiric bitterness of a Karl Goetz.

[322] PAGANI, *Monete italiane*, coin 958.

[323] For decree no. 1829 of October 11, 1925, see *RZ*, p. 43.

[324] Medal of 1946, published by PATRIGNANI, *NumR* (1948), nos. 1–3, p. 38.

[325] VOLLMER, vol. 2, p. 238.

Udine, he studied art at the Brera Academy in Milan. Well known and appreciated as a sculptor and engraver in the artistic circles of Rome since the time of Pope Pius XI, he exhibited in 1928 at the "Biennale" in Venice. In later years he was awarded the first prize with gold medal at the International Exhibition of the Medal in Madrid, 1951, for his composition *Laetizia*.

His first accomplishments at the mint were the die engravings for the gold and silver coins of 1936 and 1937, created by Giuseppe Romagnoli.[326] The substantial plasticity of Motti's engravings, rich in detail and modulation of plane, settles in Giampaoli's technique into a more linear treatment of relief. Apparently under the dictate of practical consideration, which requires a smooth surface on the coin for easy stacking, Giampaoli tended to flatten the relief, as can be seen on most of the coins created after World War II (fig. 135).

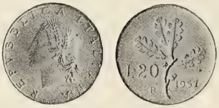

Fig. 135.—Italy, Republic, 20 lire, 1957 [327]
(Div. of Numismatics photo)

This technique is apparent not only in his earlier engravings but throughout his entire career as a coin engraver. In this respect the coins differ greatly from the medals, which achieve their excellence rather through massive and well-rounded relief. One of his most recent creations, the 500-lire piece of 1958, the first silver coin struck in Italy after World War II, shows the same low relief which was adapted for a composition otherwise in the spirit of the Renaissance (fig. 136). The distinctive harmony of this coin reveals Giampaoli's novel approach to solving the esthetic problems of modern coin engraving. A profound admirer of Renaissance art, he succeeded in completely assimilating the essence of the art concept of the 15th century.

He is so deeply affected by the spirit of the Renaissance that his creations can be considered less an interpretation than a real revival of an art concept. Many Italian artists and especially engravers have directed their attention, during the last few decades, toward the Renaissance, seeking inspiration or solutions for technical problems. Some of the medals of Mistruzzi already show the beneficial influence of Renaissance art in the simple flow of line and relief.

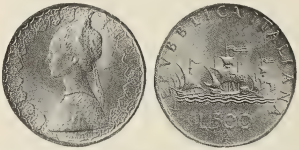

Fig. 136.—Italy, Republic, 500 lire [1958] [328]
(Div. of Numismatics photo)

Others have tried to adopt the vigorous style of these early masters of the medal, but only a few have succeeded in absorbing so completely their art concepts as Giampaoli has.

Best evidence of this is his medals, where all elements, artistic and technical, have merged to produce an amazing new movement in modern Italian engraving. Unified in conception, precise, bold in relief, at the same time graceful and harmonious, Giampaoli's portrait medals are outstanding and original. As a portraitist Giampaoli gives evidence of a limited use of realism, which permits him a more subjective interpretation of physiognomic traits. A certain static meditativeness takes away an immediate vivacity, conferring instead on the figures a more statuary quality.[329] Broad planes with a well-molded relief add to their compactness. The casting technique, more widely used by Giampaoli than the striking method, certainly enhances these effects. The surrounding legend, conceived as a sculptural element, as a component part of the composition, usually completely encloses the bust, sometimes in two or three dense rows.

One of the most remarkable creations in this series, signed by the artist as JOANNES PAULVS, is a medal dedicated to his wife Laetitia Savonitto for their tenth wedding anniversary in 1947 (fig. 137). Reminiscent of the grace and beauty of Caecilia Gonzaga on a medal engraved by Antonio Pisano (called "Pisanello") in 1447 (fig. 138) or of Giovanna Albizzi by Nicolo Fiorentino some decades later,[331] this medal apparently was valued highly by the artist himself. Ten years later, the same motif appears on the obverse of the 500-lire piece of 1958 (fig. 136), for which the sculptor Guido Veroi contributed a reverse representing the three "caravelle" of Columbus. Compared with the medal, the coin loses much of the original beauty through a more linear treatment of design. Nevertheless, the charm of the figure and the purity of the composition mark this coin image as one of the resplendent creations in modern coin engraving. The composition, however, and the surrounding circle of shields were the subject of much controversy. Criticism was brought to bear especially against the heraldic incorrectness of specific coats of arms.[333] Undoubtedly these escutcheons are superfluous additions which diminish rather than enhance the beauty of the coin. Functionally the circle replaces the inscription as an enclosure, an essential element in Renaissance medal engraving, but in this case the shields, which are more substantial than a row of letters, weigh heavily on the rest of the composition. The pure line of the center design requires a less elaborate framing.

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[326] For his more recent work, engraved from designs by Giuseppe Romagnoli, on the issues of the Italian Republic, see: Pagani, *Monete italiane*, pp. 82–86; Raymond, p. 77; Yeoman, *Catalog of World Coins*, pp. 278–279.

[327] Pagani, *Monete italiane*, coin 1352; Yeoman, p. 280, coin A102.

[328] Pagani, *Monete italiane*, coin 1311.

[329] He also engraved in 1956 a medal of Queen Elizabeth II of England, commemorating her sixth anniversary of reign—published in *IN* (1957), p. 81. For other medals, see Patrignani, *IN* (1952), vol. 3, no. 2, pp. 12–13; *IN* (1952), vol. 3, no. 5, pp. 43–45; *IN* (1955), vol. 6, no. 4, p. 27.

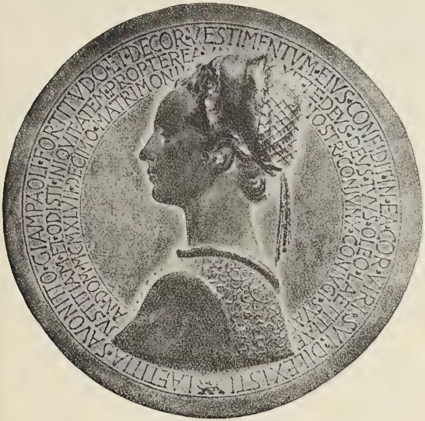

Fig. 137.—Italy, medal, commemorating Laetizia Savonito-Giampaoli, 1947 [330]
(Photo from *IN*)

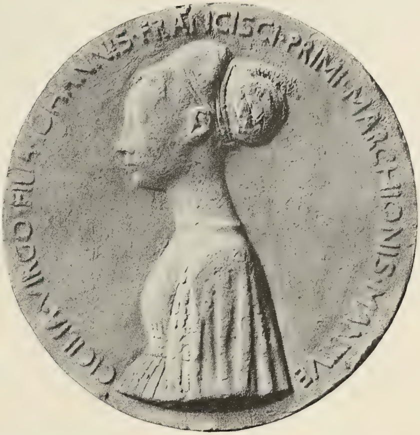

Fig. 138.—Medal of Cecilia Gonzaga by Antonio Pisano, 1447 [332]
(Photo from Hill)

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[330] Published in *IN* (1952), no. 2, p. 13.

[331] Hill, pl. 169, medal 1021.

[332] Ibid., pl. 8, medal 37.

[333] Pizzoli-Luporini, *IN* (1958), p. 66; [Anon.,] "Nostre osservazioni sulle monete da 500 lire," *IN* (1958), p. 66.

SUMMARY

The tides of history since 1800 have borne the art of Italian coin engraving from stagnant shallows to a new, high ground of creative achievement. The opening of the 19th century was marked by a serene recollection of antiquity as expressed in the dignified simplicity of neoclassicism, which soon declined, however, into a tired, anemic intellectualism. Recurrently, artists turned for inspiration to the exhausted sources of a revived classicism which could offer little spiritual guidance in an art bound more and more by official convention. Quest for perfection was confined to exterior form: coins served chiefly utilitarian purposes.

As a result, the coinage produced during the turbulent mid-century years when national unity was being forged under Victor Emmanuel II marks an amazing low point in Italian engraving. The products are cold, superficial; they do not suggest the intellectual and emotional storms which shook those decades. Gone were the eras when the Greek artist enclosed in a small piece of metal part of his own and his countrymen's soul, when Roman engravers portrayed in coarse compositions the political dreams of their leaders, when an esoteric stiffness expressed the awe before king and God which inspired the Middle Ages.

An upheaval in this stagnation was caused by public reaction in the years just prior to World War I. At the same time President Theodore Roosevelt in the United States was instigating an artistic awakening in American coinage, a radical change occurred also in Italian coin engraving. Artists began to create with the stimulating certainty that their products would be judged, admired, and criticized. New themes enlivened coin images, replacing the monotony of previous heraldic coin types. Into the fervor of this competition were drawn engravers and especially sculptors of repute, and the first decades of the present century teem with their coin projects. Their experiments reveal a new outlook in solving artistic and technical problems.

Then, in the twenties, Italian coin engraving evolved into a more definite and uniform art concept. Once again artists gravitated toward the great early sources of classical antiquity, and for over two decades the exuberant images of ancient Greece and Rome filled the imaginations of the engravers, but all too soon this ideal degenerated again into a cliché.

From this long series of discouraging repetition of classical patterns, declining finally into an obsessive mannerism, there slowly emerged a new concept—the values of Renaissance art transposed to a modern age. With such esthetics, conveyed through an elegant simplicity, Italian coin engravers have found, beyond their other trends, a promising outlook for the future of their art.

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